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The Hospital Pharmaceutical Service in Scotland

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CONTENTS

Chapter	Page	Paragraph
I INTRODUCTION	7	1–4
The Present Position	7	5–13
II THE SCOPE OF THE HOSPITAL PHARMACEUTICAL SERVICE	10	14–38
Dispensing for In-Patients	11	20–26
Dispensing for Out-Patients	12	27–38
III THE RESPONSIBILITIES OF HOSPITAL PHARMACISTS	15	39–68
The Professional Role of the Hospital Pharmacist	16	48–62
The Subsidiary Functions of the Hospital Pharmacist	19	63–68
IV THE TRAINING OF HOSPITAL PHARMACISTS	21	69–81
V THE PLANNING OF THE PHARMACY DEPARTMENT	24	82–85
VI THE ORGANISATION AND ADMINISTRATIVE STRUCTURE OF HOSPITAL PHARMACY	26	86–101
VII STAFFING AND SALARY SCALES	29	102–118
Present and Future Recruitment of Pharmacists and Promotion Procedures	30	103–108
Use, Recruitment and Training of Auxiliary Staff	31	109–116
Salary Scales	33	117–118
Acknowledgments	33	119
VIII SUMMARY OF MAIN RECOMMENDATIONS	34	—

APPENDICES

	Page
I LIST OF THOSE WHO GAVE EVIDENCE	37
II LIST OF HOSPITALS VISITED	38
III PRESCRIBING AND ADMINISTRATION OF DRUGS	38
IV QUESTIONNAIRE SENT TO BOARDS OF MANAGEMENT	41
V ANALYSIS OF REPLIES TO QUESTIONNAIRE AND TABLES	48

CHAPTER I

Introduction

1. We were appointed in June 1961 with the following terms of reference: "To enquire into the pharmaceutical services within the hospital service in the National Health Service in Scotland and to make recommendations."

2. We have met 26 times and received evidence either written or oral from the organisations and individuals named in Appendix I.

3. We have visited the hospitals listed in Appendix II, covering by deliberate choice a variety of types and sizes. We are grateful for the assistance given to us by the Boards of Management of these hospitals, by the Regional Hospital Boards and by the staffs of the hospitals — in particular the pharmacists, the medical superintendents and the administrative staff. We have found these visits of great help in reaching our conclusions.

4. As part of our attempt to analyse the existing state of hospital pharmacy in Scotland we sent out to all Boards of Management a questionnaire, the text of which is reproduced in Appendix IV. We received replies from all but two of the boards to whom we wrote and obtained valuable information from the answers received. The detailed results of this enquiry are listed in Appendix V to the report and the relevant analyses are incorporated within the main body of the report itself.

The Present Position

5. As our starting point we should like to record the impressions we have gained from our visits, and from the questionnaire, of the present position of Hospital Pharmacy. While we could not, and did not, visit all the Scottish hospitals, we have attempted, with some success we feel, to cover the range of the different sizes and types of hospitals and their pharmacies. We have seen the peripheral hospital where the pharmaceutical service depends upon a single part-time pharmacist; we have seen the large teaching hospital where the service requires a staff of 40 and in addition to the normal day to day activities of the hospital pharmacy active research is carried out and a complete day and evening service provided, with a member of the staff on call throughout the night; and we have seen many examples falling between these two extremes.

6. We found some hospitals with new, or modernised, and well laid out departments. Such departments, however, were in the minority and even some of these had insufficient storage accommodation to deal with current needs including the increasing use being made of disposable items. Elsewhere much accommodation was deficient either in size, in layout, in position or in facilities such as lighting and ventilation. While it is understandable that it has not yet been found possible to correct all the accommodation deficiencies existing at the time of nationalisation in 1948, and while we were gratified to see that in some hospitals plans were in course of preparation to improve facilities, the preponderance of poor departments seemed to indicate that the priority so far given

to corrective action of this kind may have been insufficiently high. In this connection, we recognise that pharmacy departments are not alone in requiring substantial improvement in design and layout and that we do not have enough information to be able to assess the relative importance of competing priorities. Nonetheless it has been our impression that the weight of allocation to services directly supporting the patient is often higher than their real importance within the hospital organisation justifies. We feel most strongly that pharmaceutical services should not be regarded — as at present too often they are — as incidental to the main purpose of the hospital in providing for the treatment of patients. The pharmacy department is an organic part of the whole organisation and the pharmaceutical service makes an essential contribution to the treatment of the patient just as do medical and nursing services. In other words, it is in the best interests of the patient that the hospital should not be regarded too exclusively as an environment for doctors, but as an organisation in which a large number of different related services, all of which exist for the welfare of the patient, are fused. It is in the light of this conception that we believe hospital boards should determine the degree of priority that pharmacy departments deserve. If the priority they are at present accorded is too low it is particularly unfortunate since insufficient or poorly laid out accommodation prevents optimum use being made of staff at a time when, as we shall show later, pharmacists are in short supply in the service.

7. Over the range of hospitals surveyed the position of the chief pharmacist seemed to vary almost as much as did the quality and scale of accommodation. This was reflected both in the range of duties performed and the degree to which he was accepted as a truly professional person.

8. There appears to have been no formal identification on a national basis of the role of chief pharmacist and, as a result, the responsibilities of these officers have been largely determined by the circumstances prevailing at individual hospitals and by the personalities of the holders of these posts. There can be little doubt that the resultant flexibility of the chief pharmacists' role has been of convenience for meeting local needs. However, our visits and evidence showed that this flexibility was gained in part by involving some chief pharmacists, to varying extents, in non-pharmaceutical duties. To the extent that this was true it seemed to us that the hospital service might be failing to make the best use of its professional pharmacists.

9. There were wide variations, too, even between broadly comparable groups, in the extent to which the grouping of hospitals had affected the pattern of the pharmaceutical service. In some groups, individual pharmacies continued just as before to give a service to a single hospital while, in others, action had been taken to ensure that, either by a concentration of activities or by dovetailing the work of one pharmacy with another, the available resources were put to most effective use. The original grouping together of hospitals may not have provided re-grouping possibilities for the pharmaceutical service in all cases but, from the examples we know of such re-organisation, we were left with the impression that much more remained to be done.

10. While our previous knowledge of the great diversity of types and sizes of hospitals and of sizes and areas of hospital groups had prepared us for wide variations in the scale of operations of the pharmaceutical service from hospital to hospital and from group to group, we had expected to find some similarity

between broadly comparable hospitals or groups in the standards of accommodation and staffing enjoyed, in the range of services provided and in the organisation of the pharmaceutical service. As the previous paragraphs show, this has not been our experience. Indeed a strong impression made upon us as a result of our initial investigations has been the variable range and quality of the pharmaceutical facilities in Scottish hospitals at the present time even between broadly similar hospitals and groups.

11. Perhaps we should not have found this so surprising. We have already accepted that it takes time to recognise and correct accommodation deficiencies; we accept, too, that the individual units which comprise the hospital service are unlikely ever to conform to one uniform pattern and that some flexibility, within acceptable limits, may continue to be required to meet local needs; and we might also be prepared to accept that 17 years may be too short a time for the pre-nationalisation individual pharmacy departments to grow into a truly national service. This does not affect pharmacy departments alone, but is on the contrary an effect of the conditions in which the National Health Service was created and one which, in our opinion, has been felt throughout the hospital organisation. The 1948 Act reformed the administrative structure of the service, but it did not create a wholly different pattern of growth nor did it change overnight the attitudes of hospital workers or the spirit in which hospitals were administered. In other words, the new structure was imposed on an organisation which already existed, whose attitudes had in many cases become fixed by long habit, whose traditions were at once separatist and secure. In other fields beside our own — those of nursing and hospital administration spring at once to mind — it has been necessary to allow haphazard development to continue for a number of years and then to attempt a revaluation and assess how far a structure, which is in reality centralised and coherent, should be imposed. Our difficulty in this matter arises from the need to marry the demands of administrative efficiency with those of local autonomy and professional independence. If a common overall structure had been defined at the time of the National Health Service Acts, it might have resulted in a degree of uniformity and prevented the lack of organisation with which we have been confronted; on the other hand, it might simply have imposed an administrative strait jacket on the liveliness of local development. While we have kept the latter dangers in mind we remain concerned at the fundamental nature of some of the variations and at the absence of any evidence of a co-ordinated national pattern for the hospital pharmacy service at the present time. Indeed the only constants we encountered in our visits were the conscientious service being rendered, often in difficult circumstances, by pharmaceutical staff — and this we are glad to acknowledge — and their feeling of isolation at being within and yet not feeling a part of a national service.

12. With these thoughts in mind on the present position it would be especially fortunate if circumstances were such as to enable us to recommend a formal detailed pattern for the Scottish hospital pharmaceutical service suitable for all hospitals and all groups: but for reasons of size, types and areas already referred to this is not possible. All that can be done is to concentrate on identifying basic principles capable of wide application in the hope that their acceptance will provide a broad pattern of purpose and direction. We would hope that success in this task would help the hospital service to make the most efficient

use of its pharmacists and, no less important, give to the pharmacists a sense of professional integration which they have convinced us is lacking at present.

13. The most fundamental variations, in our opinion, concern the role of the chief pharmacist. We see the definition of this role as being crucial to the future of hospital pharmacy and we have, therefore, dealt at length with this matter early in our report before proceeding to deal with the training of pharmacists and with the planning of the pharmacy. Although no single pattern is possible for the organisation of the hospital pharmaceutical service, which is our next section, we regard the examination of general principles as being of value. If hospital pharmacy is to make the best use of its resources and if its development is not to be limited by failure to establish its claim to a proper priority in competing for its share of capital and revenue allocations, its organisation requires a more systematic study than has been in evidence to date. Finally, we deal with staffing structure and recruitment, the use of auxiliary staff and salary scales. Before proceeding to these sections, however, we have felt it appropriate to begin our report proper by discussing what the role of the Scottish hospital pharmaceutical service should be.

CHAPTER II

The Scope of the Hospital Pharmaceutical Service

14. In Scotland the hospital pharmaceutical service is essentially turned inwards to the hospital and the in-patients, leaving the main needs of the general practitioner service and the community at large, including hospital out-patients, to be served by the retail chemist contractors. It has, however, been suggested to us in evidence that this role is too circumscribed and that it might be advantageous if the hospital pharmaceutical service widened its scope at least to the extent of serving the hospital out-patient as well as the in-patient. Accordingly, we felt it necessary to examine the evidence received on this important matter and to arrive at a recommendation. It may be helpful, however, if, before we do this, we first elaborate on the existing scope of the hospital pharmaceutical service.

15. The fundamental responsibility of the hospital pharmaceutical service is to act in support of the hospital medical service to ensure that all pharmaceutical preparations properly prescribed are made available for administration to the patients concerned in a safe and timely way and in the correct quantity, quality and potency. This comprehensive responsibility includes the dispensing of prescriptions but much more is involved.

16. While the hospital pharmaceutical service is based on the hospital pharmacy, the scope of the service cannot be limited to the physical confines of this department if the responsibilities set out in the previous paragraph are to be properly discharged. The hospital pharmaceutical service must be prepared to accept responsibility for ensuring that suitable arrangements are made not only for proper and secure storage within the pharmacy department but also wherever pharmaceutical preparations are kept. In addition, it must be prepared to accept responsibility for ensuring that suitable and secure arrangements are made for

preparations in transit and for their safe reception at the arrival point. If these responsibilities, including the statutory obligations devolving upon pharmacists, are to be properly discharged, it will be readily apparent that the hospital pharmaceutical service must cover all procedures from receipt of the prescription until the preparation is delivered ready for administration to the patient.

17. We emphasise this total responsibility since it is in the best interest of the hospital service that it should be clearly understood and thus facilitate the optimum co-operation between the doctor, nurse, administrator and pharmacist. This clear understanding is more likely to be brought about by a process of education in which, in relation to the medical student and student and pupil nurse in the hospital, the hospital pharmacist should be encouraged to play his full part.

18. We consider the extent to which the manufacture of preparations should be undertaken in the hospital pharmacy. We recognise that the role originally performed by the hospital pharmacist in this field has been progressively taken over by the pharmaceutical industry; and since industry is better equipped than the hospital pharmacy for the economical large-scale manufacture of standard preparations, it is unlikely that this process of change will be reversed. There is still a place in the hospital pharmacy, however, for the manufacture of special preparations, particularly since these are frequently not available from industry; we therefore feel that manufacture of this kind should be included among the responsibilities of the hospital pharmaceutical service.

19. The documentation relating to the prescription, dispensing and administration of pharmaceutical preparations is also vital to the role of the hospital pharmaceutical service although here it is an interest which it shares with the medical and nursing professions rather than a responsibility of its own. While it is generally accepted that there should be a comprehensive record of all drugs prescribed for each hospital in-patient and of the dosage and frequency of administration and the times, there is little sign that any one method of documenting this information has found complete acceptance. We have spent some time on a study of the problems involved and would wish to discuss dispensing for in-patients and dispensing for out-patients.

Dispensing for In-Patients

20. The Committee also considered the problems that arise in relation to dispensing drugs for in-patients. The ultimate objective should be a system which ensures accurate implementation of the doctor's wishes, so that the right patient receives the correct drug at the appropriate time. The system adopted should also ensure that the patient's records indicate that the correct drug has, in fact, been administered, as distinct from being prescribed. Lastly, the system should be such that the drug record can also be used to monitor adverse reactions to drugs, and to indicate particular drug sensitivities in individual patients.

21. There is considerable variation in Scotland at present regarding the method used. In at least one large hospital, prescriptions for individual patients are dispensed separately at the pharmacy, whereas elsewhere small stocks are held at ward level to fulfil patients' requirements.

22. The Committee holds the view that the system adopted should involve minimum transcription of drug requirements. Recent studies (Vere, D. W.,

Lancet, 1965, 1, 370) have shown a high incidence of error in the interpretation and implementation of doctors' intentions unless a system is used such as that employed by Crooks et al. (Lancet, 1965, 1, 373) which is an exposition of the mechanism used in Aberdeen. Appendix III to this report describes this system, which is based on the premise that drugs are prescribed upon the same document that is used to check upon the administration of the drug, and no intermediate documentation is necessary. Ward medicine books, sedative lists, etc. are all eliminated, and the document provides a means also for recording adverse reactions, the incidence of which may subsequently be studied.

23. Any system which involves each individual patient's requirements to be dispensed separately by the pharmacist requires considerable documentation, is extravagant of time and manpower when pharmacists are at a premium, and the system in any case does not eliminate the requirement for ward stocks of remedies. These are inevitably accumulated in wards to make it possible to administer "once-only" to a patient drugs such as a hypnotic, analgesic, diuretic, etc. for which it would be uneconomic to require an individual prescription.

24. Ward stocks should not be extensive, and, as such stocks are always accumulated whatever system for dispensing is adopted, they should remain under the control of the pharmacist, and subject to his review and replacement. Unless this occurs, stocks tend to grow in order to cater for occasional emergency situations whose demands require to be quickly satisfied. Surplus stocks should be returned to the main pharmacy.

25. We have noted that various hospitals in Scotland have adopted a system for recording and administering drugs to in-patients that involves a minimum transcription of drugs prescribed by the medical staff. The pilot study in Aberdeen has shown that it is possible to evolve such a system based on a single document on which are recorded the

(a) patient's requirement as prescribed by the doctor

(b) the fact that the drug has in fact been administered by the nursing staff at the time indicated, and

(c) the incidence of any sensitivity to, or adverse reaction to, a given drug.

26. Such a system involves the maintenance of small stocks at ward level, and we recommend that such stocks should be under the overall control of the hospital pharmacist. These stocks should be requisitioned on an order signed by a registered medical practitioner or registered nurse or midwife. The pharmacist should, in consultation with medical and nursing staff at the ward level, regularly review ward stocks, withdraw unnecessary stock, and replenish when indicated. We are of the view that the extension of the hospital pharmacist's responsibility such that it embraces the establishment, maintenance and control of ward stocks, as well as the main pharmacy stocks, should provide a mechanism whereby the professional skills of the pharmacist are more effectively utilised by the hospital service.

Dispensing for Out-Patients

27. We considered the question of how far dispensing for out-patients was carried on in Scottish hospitals at present and whether there was any necessity for an extension of the current practice. The present position, judging from the

answers to the questionnaires and from our own visits to hospital pharmacies throughout Scotland, is that only a limited amount of out-patient dispensing is carried on. The more common method of arranging for the supply of medicines is for the consultant to notify the patient's general practitioner of the treatment he advises and for the practitioner to prescribe the required drugs on a prescription form. In certain cases, especially for country patients, the patient is supplied with a small quantity of drugs when he leaves hospital to tide him over until he can be expected to obtain supplies in the normal way through his general practitioner. There is also a limited use of hospital prescription forms (RBP (Scotland) Forms) for dispensing by chemist contractors.

28. The occasions on which drugs should be supplied by hospitals to out-patients are:

(a) Prescriptions urgently required.
(b) Prescriptions for patients on discharge, sufficient to cover their needs until they can obtain a supply through their general practitioners.
(c) Drugs required for special clinics, particularly where there is no direct follow-up with the general practitioner.
(d) Drugs which are difficult to obtain, or which are restricted to the hospital service.
(e) Drugs for casualties.
(f) Drugs required for clinical trials.

We believe that there may be a certain amount of overlap in the above suggestions; for instance, it may well be that urgent prescriptions and prescriptions for casualties represent the same situation presented in a slightly different form.

29. The arguments advanced for an extension of out-patient dispensing fall into two main categories. In the first category come arguments directed to the whole question of the prescribing of drugs under the consultant's supervision and in the second category come arguments directed to economies expected in the Service. In the first category the arguments are:

(a) The consultant could ensure commencement and/or continuity of treatment with the minimum possible delay. This might be particularly important in remote areas.
(b) The consultant could ensure that the hospital pharmacist had available the exact drug which he wished to use. We have been informed that the general practitioner does not always prescribe exactly as advised by the consultant.
(c) The consultant could control the length of time during which the required drug is prescribed.
(d) The hospital pharmaceutical department would label the medicine in the manner desired by the consultant thus resulting in uniform labelling which is not always possible in general practice owing to the diversity of directions given by the general practitioner.

30. We appreciate, however, that the present arrangements already make provision for the supply of an initial quantity of a drug to ensure medication until supplies can be obtained through the general practitioner, who, under his Terms of Service under the National Health Service, has the responsibility to prescribe for his patients.

31. We concluded that these arguments did not relate to the dispensing of drugs from hospital pharmacies but to the method of prescribing to be preferred by the medical profession. We are satisfied that this matter is outwith our terms of reference and that any guidance on it would fall to be given by a medical body such as the Standing Medical Advisory Committee.

32. However, we should like to express our support for the principle laid down in Ministry of Health Circular HM (64)74 which does not appear to have a Scottish counterpart. This circular states that:

"The duty of prescribing rests with the doctor who at the time has the clinical responsibility for the patient's treatment so that where a hospital doctor bears the clinical responsibility for a patient having a course of investigation or treatment as an out-patient, he should prescribe for the patient's needs. When the hospital doctor decides to return the patient to the care of his general practitioner the responsibility for prescribing will thereafter rest with the latter. In some circumstances this may mean that where an out-patient has been referred to a consultant for opinion and advice or treatment, the hospital will not provide drugs or would provide them for only a very short period. But on the occasion when the clinical responsibility for the out-patient has to be retained by a hospital doctor (this being a matter for decision taken individually for each patient) there should be no attempt by hospital authorities to arrange:

(a) that the patients are referred to their general practitioner for prescribing, or

(b) that the prescriptions should be for a lesser period than is needed to cover the time when the hospital doctor is likely to see the patient again,

either for financial reasons or on the contention that a general practitioner has a continuing clinical responsibility for all his patients."

33. With regard to costs, it was argued that an extension of out-patient dispensing would result in economies because of the bulk buying of drugs by hospitals, and because of the absence of dispensing fees paid to retail pharmacists.

34. Nevertheless, any alterations in the existing arrangements could not be carried out in many existing hospitals without increasing the available accommodation for the pharmacy, and this would involve considerable capital expense. Increases in the out-patient facilities would not necessarily result in greater convenience to the patient, particularly in the many areas where the services of chemist contractors are readily available.

35. We have been unable to secure comparative figures of cost in sufficient detail to estimate what saving, if any, would result from an extension of the out-patient service, but such figures as we have received, although very tentative, indicated that, even disregarding the cost of the provision of extra accommodation and facilities, such savings as there would be would represent a small proportion only of the present cost of the pharmaceutical services in Scotland. Our conclusion is, therefore, that dispensing for out-patients need not be greatly extended but should be fully employed for the purposes listed in paragraph 28 above.

36. Two other aspects of this subject have been brought to our notice, and have caused us concern.

37. Out-patient dispensing may involve, not only dispensing for individual patients, but supplying drugs in pre-packed containers to an out-patient clinic (e.g. an ante-natal clinic) which may be some distance away from the pharmaceutical department and so outwith immediate pharmaceutical control. These drugs are handed out, in the absence of a doctor, by the sister in charge. We believe that the pharmacist should strictly control the type of preparation which can be handed out in this manner. Dangerous substances or habit forming preparations must be prescribed by the doctor on an R.B.P. (Scotland) form or by advising the general practitioner to prescribe such drugs on Form E.C.10.

38. We also understand that drugs are sometimes issued from the ward to patients who are being discharged and that these drugs are frequently unlabelled and issued in unsuitable containers such as envelopes. Such practices must be condemned. We would stress that it is essential that all drugs which are supplied from hospital should be labelled and dispensed in suitable containers. All such drugs should be dispensed, packed and labelled by the pharmaceutical department, and an appropriate record of the provision of the drugs should be included in the documents relating to the patient.

CHAPTER III

Responsibilities of Hospital Pharmacists

39. Before considering the range of services which hospital pharmacists should be expected to provide, we carried out an enquiry to find out what services were being provided at present. The result of this enquiry is summarised in Appendix V Table 13, and in paragraphs 40-47 we discuss the present position.

40. The pharmaceutical departments of sixty-eight hospitals which replied to the questionnaire were engaged in the supply of medicines, as one would expect, but this was the only service which was common to all. About three-quarters were responsible for the supply of surgical instruments and sundries and two-thirds for the supply of dressings, the next largest groups being laboratory and X-ray supplies respectively. We are convinced that, apart from the supply of medicines, variations in the method of recording the services provided by the various hospitals concerned has resulted in a number of hospital pharmacies not being credited with the full range of services which they provide, and we believe therefore that Table 13 under-states the present position. Our conviction on this point is strengthened by our own observations as we visited hospital pharmacies and by evidence submitted to us, all of which indicates that the traditional role of the hospital pharmacist in Scotland, of being much more than a dispenser of medicines, is being continued under the National Health Service.

41. It is probably true that no single hospital pharmacy provides the entire range of services set out in Table 13 and it may well be that the continuous growth of non-professional functions is a problem common to all professions. Nevertheless, our experience of the incidence of duties not strictly professional in content, and the extent to which they are accepted by hospital pharmacists, is such that we see this problem as being of fundamental importance to hospital

pharmacy at the present time and one to which attention should be given early in our report. In reaching this conclusion we have principally in mind, at this stage, the need to make the most effective use of professional staff.

42. Conflicting evidence has been put before us as to whether the traditionally wider role of the hospital pharmacist in Scotland is in the best interest of the service and the profession, and the following paragraphs summarise both sides of the argument.

43. Advocates for the retention of the wider role point out that the special medical and surgical needs of the patient do not stop short at medicines or medicinal substances but include surgical dressings, instruments and sundries as well as larger items of specialised equipment. Attention is drawn to the close association which the pharmacist enjoys with his medical and nursing colleagues; his experience in the allied fields of supply over the years; and the fact that some of the commercial suppliers concerned operate over more than one field. The conclusion drawn is that there is no one better fitted than the pharmacist to identify the original specification, and to arrange that it be met not only satisfactorily in relation to quality and economy but also conveniently in relation to the time and effort involved for all parties.

44. It is argued that necessity dictates the wider role in the small hospital and commonsense in the large. In the small hospital there may be no other officer available; in the large hospital, and particularly the large teaching hospital, the chief pharmacist, it is suggested, inevitably becomes an organiser of the various sectionalised interests of his busy department which, in view of the available experience and resources, is the appropriate supply centre for all specialised medical and surgical needs.

45. Furthermore, it has been noted that, where the wider role is undertaken, at least some of the chief pharmacists concerned have found a measure of satisfaction in the acceptance and discharge of their additional duties and might regret any narrowing of their functions.

46. The argument against the wider role of the hospital pharmacist stands fundamentally on the inescapable logic that time spent on non-pharmaceutical duties represents an equivalent loss of valuable professional time. Current recruitment difficulties may make this argument more immediately acceptable; but it is not founded upon these but upon the belief that professional training should be applied first in total encompassment of the professional function and thereafter, should time be available, to non-professional activities only in so far as these cannot properly or readily be carried out by anyone else.

47. Perhaps the suggestion of greatest interest to us has been that, by accepting the wider role with its range of additional non-professional duties, the hospital pharmacist may have tended to blur his true professional identity in the eyes of his medical colleagues with results that may have included a diminished acceptance of him as a professional adviser.

The Professional Role of the Hospital Pharmacist

48. Having considered all the evidence on this fundamental matter, we believe that it would be unwise to lay down any comprehensive pattern of responsibilities for universal application throughout the hospital service in Scotland. The role of the pharmacist is partly shaped by local factors such as the size and

type of the hospital, and its relationship to the rest of the groups and it is unlikely that any single comprehensive scheme would fit every individual circumstance. Where, therefore, local variations genuinely arise as a response to local needs, we should not wish to interfere with them.

49. Nevertheless, we are convinced that sharp and clear identification of the *essential professional role* of the pharmacist must be common to all hopitals and that no reasons either of convenience or expediency should be allowed to obscure this professional identity.

50. And finally, we are agreed that the first step is to endeavour to define this essential professional role of the pharmacist and, thereafter, to establish principles to which regard should be paid before any extension of responsibility beyond the strictly professional is given or accepted.

51. In considering this problem we have in mind the general background of the hospital pharmacist's legal responsibilities in relation to the care, storage and dispensing of dangerous drugs, poisons and therapeutic substances, and in our view the strictly professional role of the hospital pharmacist falls into two parts:

(i) the purchase, storage, preparation where appropriate, and dispensing of medicinal substances including diagnostic agents and medical gases; and

(ii) the giving of advice and guidance to all hospital staffs on matters pertaining to pharmacy, including participation as required by local circumstances in the training in pharmacy and pharmacology of nurses and medical students.

52. In order to be more explicit we would expand 51(i) as follows:

(a) to ensure that the facilities and equipment necessary for the efficient and economical working of the pharmaceutical department are available;

(b) to be responsible for the purchase of drugs, medicinal preparations, chemicals and pharmaceutical sundries of the appropriate quality and standard, and for their storage;

(c) to make preparations for medical or surgical use or for use in dispensing prescriptions;

(d) to dispense prescriptions;

(e) to ensure that all drugs and pharmaceutical preparations, wherever stored in the hospital, maintain their potency and quality; this applies, of course, to ward stocks (which should be kept to the minimum and should be regularly inspected by the pharmacist as part of the normal survey of his Department);

(f) to investigate formulation problems arising in established methods of treatment and in the development of new methods of treatment;

(g) to promote economy in the use of medical supplies.

53. It will be noted that we have excluded surgical dressings, but these will be dealt with later (paragraph 64). We have purposely placed the promotion of economy at the end of the list. We believe it to be an important and appropriate part of the pharmacist's function but it must not be allowed to take up an undue amount of professional time, and any accounting or clerical work necessary should be done by suitable staff.

54. Our second part of the hospital pharmacist's professional role appears in the Linstead Report as function (9) where it is defined as being "to assist in efficient prescribing by advising upon the nature and properties of medicaments and upon the selection of the most suitable substances and the form in which they should be prescribed".

We see this responsibility as being an essential corollary of the first function and should like to explain the reasoning which has led us to this conclusion.

55. In recent years there have been considerable changes in pharmaceutics with new trends sharply in evidence. On the one hand the tablet, the capsule and the ampoule now offer the hospital pharmacist supplies of pre-packed medicaments, and, on the other there is continual change in the range, complexity and effectiveness of the drugs being used, coupled with a rapidly increasing number of new pharmaceutical developments. While the hospital pharmacist still has the task of the formulation and compounding of individual medicaments and preparations for the special treatment of individual patients under specialist care, there seems little doubt that, if he is to maintain his professional competence, an increasing proportion of his time must be spent on keeping up-to-date with improvements and discoveries and in current procedures and thinking.

56. We are not convinced from what we have seen that, in general, this is being done at present as well as it could. Among the reasons for this are scarcity of time, inadequacy of arrangements for attendance at post-graduate courses, and lack of proper reference library facilities. While much of any professional reading will always require to be a spare time activity, we see the rate of new developments in pharmacy affecting the professional habits of the medical staff so greatly that we are not prepared to see this need to keep abreast of progress left to chance or to the unaided efforts only of the more energetic members to be found in this, as in any profession.

57. We are strengthened in our reasoning on this point by medical evidence received which we should like to quote in full:

"The responsibility of the clinician must be paramount in the choice of any particular drug or preparation but the pharmacist, having regard to his professional training and experience, has the special competence to advise the clinician about the presentation and formulation of a chosen drug and this is of special significance in relation to the increasing number of new drugs and their variations. Ideally the clinician could regard the pharmacist as his pharmaceutical consultant and the pharmacist would do well to build up an efficient but economical "information service" to be at the disposal of the medical staff."

58. Accordingly, we recommend that this duty of acting as a professional adviser to the medical and nursing staffs, with all that it entails, be clearly laid upon the pharmacist as a professional responsibility and that hospital authorities — as some already do — should be charged with providing the facilities necessary to its proper fulfilment, including:

(i) adequate arrangements (including financial assistance) for the attendance at post-graduate courses etc. at intervals, possibly yearly, of all chief pharmacists and such other pharmaceutical staff as may be appropriate;

(ii) financial provision for the purchase of journals and reference books for the establishment of a pharmaceutical reference room preferably situated in or adjacent to the pharmaceutical department; and

(iii) acceptance of the need for a part of the working time of any chief pharmacist to be spent in improving his knowledge of current pharmaceutical developments and future trends whether by way of reading, discussion or by visitation.

59. While we are aware that the use made of an advisory service of the kind envisaged, and the success attending it, will depend upon the attitude and personalities of both adviser and recipient, we feel confident that the improvement in the ability of the hospital pharmacist to fulfil this role of adviser, which acceptance of our recommendations could be expected to accomplish, would see a gradual extension and growing acceptance of this responsibility. In time we would expect the pharmaceutical reference room to be as well used by the medical staff as their own libraries and to be the place where pharmaceutical matters would be discussed not only with the chief pharmacist but between themselves and perhaps even with professional representatives.

60. The establishment of this advisory service should help to overcome the sense of isolation from their professional colleagues felt by some hospital pharmacists and should give them a deeper sense of professional involvement in the hospital service. This is crucial to the career satisfaction of hospital pharmacy and to future recruitment.

61. The third element in the professional functions of the hospital pharmacist is in our view his position in assisting the training of nurses and medical students in the subjects on which he is an expert. In considering this role, we are very conscious of the fact that the nursing and medical staff have a close interest in this training, and that the amount of help which can be given by the pharmacist will vary from area to area and from hospital to hospital. This is probably more applicable to Scotland than it would be in England since the teaching of pharmacology is more closely allied to the medical curriculum teaching in Scotland than south of the Border, and consequently there are University departments connected particularly with the large teaching hospitals which carry out a very great deal of training in the field of pharmacology and therapeutics. At the same time, particularly on legislation relating to dangerous drugs and poisons, and on methods of presentation of medicines, the pharmacist is the expert, and he will always have a part to play in teaching of this kind.

62. Our intention in defining the professional role of the hospital pharmacist has been to identify those functions which the pharmacist alone is qualified to discharge. As we have shown earlier, however, there are other duties which hospital pharmacists undertake and the time has now come to consider, first, the principles to which attention should be paid in this connection and, second, the effect of the application of these principles.

Subsidiary Functions of the Hospital Pharmacist

63. In our opinion the principles which should guide the attachment of responsibilities, other than the two strictly professional ones outlined, can be summarised as follows:

(i) Additional duties should be accepted only to such an extent as will neither prejudice nor impair the essential professional work of the hospital pharmacist.

(ii) Additional duties should be accepted only where the technical content of these duties is such that the pharmacist's professional training and experience could be expected to be of substantial assistance to the efficient performance of the additional work and where the application of the fruits of this training and experience could be justified.

(iii) Supporting staff, for example of a technical or clerical nature, must be provided in sufficient numbers to ensure that the non-professional use of the pharmacist's time is kept to a minimum.

(iv) Administrative convenience should not be a decisive factor.

64. As a result of the formulation and application of these principles we have agreed to divide into two groups the remainder of the range of duties which table 13 shows as being undertaken by hospital pharmacists in Scotland at the present time. The first group seems to us to satisfy the principles set down in the preceding paragraph while the second group does not.

We would summarise our first group as meanwhile covering responsibility for the purchase, storage and issue of surgical dressings, instruments and sundries including all prepared sterilised materials.

65. This responsibility seems to us a logical extension of the hospital pharmacist's professional work which could justify the application of his training and experience and we would accept it coming under his jurisdiction provided adequate supporting staff of all necessary grades were forthcoming and to the extent that professional staff was available to supervise. Where present practice runs contrary, we consider that hospitals should review their existing arrangements in the light of our recommendations. It is appreciated that, on occasions, there may be local difficulties in the way of immediate implementation of changes which may be proposed as a result of such reviews. In such instances we would recommend that agreement shall be reached to implement these changes as opportunity occurs.

66. We have had some difficulty in reaching a decision not to include this responsibility as part of the pharmacist's basic responsibility — particularly in relation to surgical dressings where it has been very cogently argued before us in evidence that, from the point of view of control of quality alone, their purchase must as a matter of principle be a pharmaceutical responsibility. However, as we already explained, we have decided to limit the basic professional responsibilities of hospital pharmacists to those which only pharmacists are qualified to undertake. On this reasoning the group of duties in this paragraph must be dealt with separately, since we have had to accept the evidence that it is possible for them to be accomplished by persons other than pharmacists. We emphasise, however, that the advice and guidance of the chief pharmacist be taken in relation to quality and sterility.

67. The second group is more difficult to define comprehensively but can be taken to include the following:

(i) The purchase, care and issue of laboratory chemicals and equipment.

(ii) The purchase of X-ray materials.

(iii) The purchase of medical photography supplies.

(iv) The purchase and supply of medical and surgical equipment.

While we would not wish any recommendation we make to cause immediate upset to longstanding and effective arrangements which may be in existence at present, we are in no doubt that the above duties are not appropriate responsibilities of the hospital pharmacist and we would expect them, where so undertaken at present, to be gradually discarded, particularly where their acceptance has made undue demands on the pharmacist's professional time.

68. In reaching this conclusion we have disregarded the situation where a pharmaceutical department with adequate clerical staff affords a convenient centre for the routine ordering of basic supplies for other departments. Where this occurs and little, if any, professional time is involved we would think that the decision as to whether to continue the procedure or to change it is a matter for local determination. We have heard evidence, however, of substantial inroads being made on professional time in relation to the specification of medical and surgical equipment and this practice we think is wrong. The specification of medical and surgical equipment is a matter which the Henderson Committee saw as being initially an advisory function of Medical Superintendents and Medical Staff Committees with, we presume, eventual purchase being arranged through administrative and technical channels. With this view we would not disagree.

CHAPTER IV

The Training of Hospital Pharmacists

69. When this report was being written pharmaceutical education in Britain was entering a transition period, and it may be that by the time the report is published changes will have already taken place. Up to the present, prospective pharmacists have had the choice of taking a course of study leading to the Pharmaceutical Chemist Qualifying Examination conducted by the Pharmaceutical Society of Great Britain or of reading for an approved degree in pharmacy awarded by six of the British universities.

70. The current curriculum for the Pharmaceutical Chemist Qualifying Examination is intended to be suitable for a student who wishes to enter any branch of the profession. It has a small section on hospital pharmacy which we understand is, in most colleges, taught by a hospital pharmacist, or by someone who has had experience in hospital pharmacy. This gives students some knowledge of the principles and practice of pharmacy as practised in hospitals and may be an encouragement to some to make that branch their career.

71. As universities are autonomous institutions, it follows that no two university degrees are identical in content. It is necessary, however, for the syllabus of each degree to be approved by the Pharmaceutical Society before it is accepted as suitable, in the context of the regulations, for registration as a pharmaceutical chemist. There are two types of degree at present, one of which is general in content and corresponds approximately to the Society's qualification.

72. Other university degrees, sometimes known as special degrees, introduce a certain amount of specialisation in one or two subjects in the final year, and although they must all contain a minimum amount of general pharmacy to be recognised by the Society for registration purposes, they may not all be equally

useful to the prospective hospital pharmacist. For example, a degree which specialised in pharmaceutics and/or pharmacology would be much more suitable for this purpose than one which specialised in pharmacognosy and/or pharmaceutical engineering. No degree has, so far, specialised in hospital pharmacy and we would agree that such specialisation might be more suitable at the post-graduate stage. We discuss this further in paragraph 81.

73. Since the Robbins Committee published its report on higher education some of the Colleges which at present conduct courses for the Society's qualification are being upgraded to university status and will in future offer their own degrees in pharmacy. Other colleges containing Schools of Pharmacy may offer degrees through the Council for National Academic Awards. It seems clear, therefore, that in future the majority of pharmacy students (if not all) will qualify by means of a university degree or through the Council for National Academic Awards.

74. This seems to us satisfactory particularly since we are ready to accept that there may no longer be a place for a qualifying examination which is close to degree standard but does not confer a degree. Moreover, we feel that hospital pharmacists have a part to play in under-graduate education and it is essential that students complete their course with a full understanding of the scope and nature of hospital pharmacy and the functions the hospital pharmacist performs. Universities should offer the opportunity for a hospital chief pharmacist to deliver lectures and for students to visit hospital pharmacies and we feel that this would make the work of hospital pharmacists more widely understood. It would furthermore, establish a fruitful and durable relationship between university departments and the hospital pharmaceutical service. While we cannot make recommendations on the detailed arrangements since these should be the subject of agreement between the universities and the hospital authorities, we hope that the latter would be ready to make available hospital pharmacy departments for this purpose and also that they would be ready to consider the attachment of formal teaching responsibilities to the chief pharmacists of certain major hospitals. If, for example, the chief pharmacists of the main teaching hospitals in the university centres had a formal commitment to the university, this would both increase the status of their posts and ensure that hospital pharmacy was recognised as an essential part of undergraduate education.

75. After passing the Society's examination or a university degree examination, the prospective pharmacist must undergo one year of practical training under a pharmacist in, normally, a retail pharmacy, a hospital pharmacy or industry before being admitted to the register of pharmaceutical chemists. We believe that such in-service training of students is a duty of hospital pharmacy in general and that facilities should exist in all regions to train students as and when they are available. From figures obtained from the Pharmaceutical Society it would not appear that such facilities are being properly used since at March, 1965 only 7 out of 40 established post-graduate student posts in the Scottish Hospital Service were filled. We consider this matter further in the following paragraphs but would first wish to suggest that the filling of such posts might be facilitated if a financial allocation could be made on a regional basis with the necessary allotments being transferred to the individual hospital or group as the need arises. In our opinion such appointments should be supernumerary to the normal establishment.

76. It is essential that such students should be given a comprehensive training in all aspects of hospital pharmacy. This is usually only possible in the larger hospitals, such as those in Category IV or V, but we would not exclude entirely the possibility of training students in those of lower categories either alone if they have a sufficiently wide range of duties or alternatively in conjunction with other hospitals. At present the Pharmaceutical Society restricts the year of practical training to periods of not less than six months in any one premises. We would suggest that this regulation be relaxed slightly in order to allow a student to carry out his training in a hospital group where he could get his broad experience in the various types of hospital in the group.

77. There are at present no arrangements for the planning of post-graduate training beyond the level of the hospital group. There is therefore a strong case for an advisory body to keep a watching brief on the use of training facilities in the Region and advise on changes and possible improvements. This should not prejudice the freedom of students to choose within the limits we have suggested in paragraph 76 above in which hospitals to do their training, but it might go some way to ensure that post-graduate training should only be undertaken by those hospitals which have a sufficient range of facilities to cater for it and also open the possibility of training within areas larger than those of a single hospital.

78. We have considered the extent to which places for students in hospitals should be related to the number of posts which are likely to be available to them thereafter. In view of the small number of students who are at present in training, this is not an urgent problem and no planning of resources would be likely to lead to practical restrictions on the number of students who undertake their post-graduate training in hospitals. Moreover, we feel that it should be possible for students who do not necessarily intend to make hospital pharmacy their career to train in hospitals, particularly since a post-graduate course should encourage many students to continue in this branch of the profession. However, Regional Pharmaceutical Advisory Committees might well watch over the relationship between the number of students in training and the pharmaceutical posts available to them in hospitals after their training has been completed. This might enable them to estimate how far the hospital resources of the Region were being properly used for the training of students, and how far the year of post-graduate training in hospitals was in practice acting as an incentive to students to continue in the hospital field after it was completed.

79. The Whitley scale for post-graduate remuneration in the hospitals compares most unfavourably with the highest scales paid in other branches of pharmacy, and this is one of the main reasons why so few students enter hospital pharmacy for their practical training.

80. As the years since qualification increase, all professional people are faced with the problem of keeping abreast with current knowledge, and the hospital pharmacist, of all grades, is no exception. Much of this has, of necessity, to be done by private reading, and the pharmacist can be encouraged in this by an annual grant to keep the departmental library (see paragraph 58) up-to-date, so that the necessary books are available to him. Another valuable aid in this respect is the attendance by the pharmacist at symposia, conferences or "summer schools" organised by the Pharmaceutical Society, the Guild of Public Pharmacists or other organisations. Such gatherings have a double value as the attenders, apart from absorbing the formal knowledge available, and this is

often equally important, are brought into close and fruitful contact with their colleagues from many different backgrounds, yet with many common problems and difficulties which can sometimes be solved by sharing with others. Scotland has been lacking in the provision of such courses in the past. That they would be taken advantage of is shown by the response to the first course held in April 1964 which was attended by almost half of the hospital pharmacists in Scotland. A need exists for such courses to be held regularly, both regionally and nationally and Boards of Management should provide the facilities, both as regards time and finance, to enable pharmacists to attend.

81. We found a certain degree of frustration among some pharmacists, especially among those not holding a university degree, that there was no opportunity to work for a higher qualification or diploma. We would suggest that there is room for a post-graduate diploma in hospital pharmacy. Whether this should be offered by the Pharmaceutical Society or by individual Schools of Pharmacy is a matter for discussion. This diploma should be open to registered pharmaceutical chemists who have completed a certain length of time in hospital pharmacy (say three or five years). The subjects of the diploma might include advanced pharmaceutics (including microbiology), pharmacology and administration. In time the holders of such diplomas would provide a pool from which chief pharmacists would be chosen.

CHAPTER V

The Planning of the Pharmacy Department

82. Our visits to a number of hospital pharmaceutical departments demonstrated to us the variable quality of the accommodation in which these departments were housed. Often we found that premises were totally inadequate and quite unsuitable for modern needs and are only functioning through the ingenuity and resource of the staff working in them. Occasionally we saw up-to-date, modern and well equipped pharmacies through which was established an efficient flow of work.

83. The size of the premises which we visited also varied very widely with no relation to the number of beds served. The evidence received in answer to our questionnaire revealed that, in the main groups, the average number of square feet of pharmaceutical department space per bed served was:

Teaching Hospital	—	3.8 square feet
General Hospitals	—	3.0 „ „
Mental Hospitals	—	0.8 „ „
Hospitals with a Group Pharmacy	—	2.7 „ „

These figures when compared with the minimum space ratios suggested by the Guild of Public Pharmacists in their booklet 'Hospital Pharmacy Planning' published in 1961, show that the best group has just over half the space recommended for a hospital of its size. We were, therefore, reinforced in our conclusion that the accommodation of pharmaceutical departments in Scottish hospitals is most inadequate.

84. When planning new pharmacy departments (or the modification and improvement of old ones) professional experience and advice should be used to the full and chief pharmacists should be consulted from an early stage. However, we believe that, in the light of the range of services which we consider should be provided, there are a number of general principles applicable to all types of hospitals.

(a) — The planning should always be undertaken on the basis of work flow so as to make the most efficient and economical use of the space available and designed so as to secure maximum flexibility of internal layout. We frequently saw evidence of the way in which changing pharmaceutical practice could change preconceived ideas about the planning of a department.

(b) — Wherever possible, the department should be situated on one floor preferably at ground level. We recognise, however, that this may not always be possible, but we should stress that a divided department raises problems of supervision and sections should not be located on more than two floors. When planning considerations make this necessary an interconnecting lift should be provided.

(c) — The department should be sited in such a position as to facilitate distribution of supplies to the wards. The department receives frequent deliveries of goods and in many cases despatches requirements to other hospitals. A location with ready access to the hospital central delivery point is therefore desirable.

(d) — In the larger hospitals facilities in the department should be provided for a dispensary with separate service areas for in-patients and out-patients, the manufacture of sterile and non-sterile products, storage, and separate office accommodation for the chief pharmacist, deputy chief pharmacist and clerical staff. A library for general reference books and technical literature is most helpful and in certain hospitals a control laboratory will be required. The need to ensure that manufacturing is carried out on an economical basis may locate these activities centrally in the group and facilities for this aspect of the work may be limited in the smaller hospital.

85. In connection with our study of the accommodation needed we have considered a draft of a Ministry of Health Hospital Building Note and are content that this note, when published, will offer most useful advice. For the sizes and type of hospitals covered floor areas are reasonable with the exception that to take account of the wider range of supplies dealt with in Scotland additional storage space will be necessary. The sections on heating, lighting and ventilation, as well as advice on conditions of storage and suitable fittings will prove most helpful.

CHAPTER VI

The Organisation and Administrative Structure of Hospital Pharmacy

86. In the light of our view of the duties, responsibilities, and general professional status of the pharmacist within the hospital service, we decided to review the structure of the pharmaceutical service within the hospital service in Scotland, to see whether any changes were desirable, and, if so, what changes would most benefit the efficiency of the service.

87. Since the advent of the National Health Service in 1948 there have been changes in the organisation of the pharmaceutical service at least in certain hospital groups. In some, the pharmaceutical service has been centralised in one hospital which acts as a feeder to the remainder of the group; in others, the roles of the individual pharmacies have been made complementary to each other; and we are aware that there are some pharmacies which give a service to hospitals outwith their own group. There are, however, other groups where the individual pharmacies continue to function quite independently of each other.

88. We consider that developments of the kind mentioned are essential to the efficiency and progress of the hospital pharmaceutical service and are concerned that change has so far come about too slowly. Moreover, these changes are the result of individual initiative and enthusiasm and not a consequence of any national policy. We are convinced that the time has come for a more systematic approach to the organisation of the hospital pharmaceutical service.

89. We regard it as a logical extension of the policy of grouping hospitals together that the pharmaceutical service should normally be organised on this basis or on a combination of groups where circumstances so dictate. Furthermore we consider it essential that each organisational unit would require an executive head who we recommend should be called Group Chief Pharmacist.

90. In reaching these conclusions we have taken into account that the evidence we received was strongly in favour of the pharmaceutical service being organised on a group basis which it was felt would enable a greater degree of co-ordination to be secured, make possible more effective use of professional and other staff, provide better opportunities for pharmacists in training and improve the career structure of hospital pharmacy. Some concern was expressed, however, lest the appointment of a Group Chief Pharmacist would have an adverse effect on the status of the chief pharmacists within the group and jeopardise staff relations. On this point we obtained the views of our English colleagues, since Group Chief Pharmacists are already recognised in England, and we are satisfied from their evidence that difficulties of the kinds envisaged were rare and that most chief pharmacists welcome the unified direction which a Group Chief Pharmacist can provide.

91. There would be two types of Group Chief Pharmacists according to the pattern of the pharmaceutical organisation within the group. The first type would be appropriate to situations where it had proved desirable and possible

to establish a centralised service based on a single group pharmacy. Here the title of Group Chief Pharmacist would give formal recognition for the first time to such officers in Scotland.

92. The second type of Group Chief Pharmacist would be appropriate to the situation where there was more than one pharmacy within the area of responsibility of the Group Chief. In such circumstances the Group Chief Pharmacist would be based at one of the pharmacies for which he would act as Chief Pharmacist. In addition he would have supervisory responsibility for the other pharmacies within the group, each of which would have its own Chief Pharmacist. We recognise that these recommendations relating to the appointment of two different types of Group Chief Pharmacist in Scotland would require to be considered by the appropriate Whitley Council.

93. We envisage that the duties of the Group Chief Pharmacist would include the following:

(a) Responsibility for the effective organisation of the pharmaceutical service for the group, including authority

- (i) to delegate work which can be done on a group basis between the various hospital pharmacies so as to secure the most efficient and economic use of the resources of the whole group;
- (ii) to transfer work between the various hospitals of the group as may be necessary to maintain an efficient service.

(b) Responsibility for establishing, within the financial resources approved by the Board of Management, a balanced staff of pharmacists, dispensing assistants, technicians and auxiliary staff to meet the requirements of the group as a whole and to avoid the duplication of staff which can arise through duplication of functions between hospitals.

(c) The co-ordination, throughout the group, of all arrangements for the ordering, receipt, storage and issue of supplies to ensure maximum rationalisation and also the fullest possible use of the Central Contracts arrangements.

(d) The giving of advice about the policy to be adopted by the group on such matters as the manufacture of drugs or the centralisation of facilities and on planning matters affecting the pharmaceutical service. The Group Chief Pharmacist would be immediately responsible to the Medical Superintendent or, in the absence of such a post, to the Secretary and Treasurer.

94. One of our main preoccupations has been how to make the best use of the professional services of the hospital pharmacist and we are sure that the organisation of the hospital pharmaceutical service on a group basis would help towards this end. We have considered, however, whether we could go further and recommend that, wherever possible, the service should be centralised in a group pharmacy. Even where this is possible we realise that the gain of making the best use of staff and accommodation can be offset by disadvantages, not the least of which may be the reduction in day to day personal contact between the pharmacists and the medical and nursing staffs in outlying hospitals. Even under a centralised system there would require to be regular visits to the wards by a pharmacist and in addition we would also expect the chief pharmacist and his deputy to be readily accessible to medical or nursing staff anywhere within the group.

95. In any event the possibility of such centralisation depends largely on the character of each group and the relationship of its constituent parts to each other. There is no ready made solution which can be universally applied. While we are agreed, therefore, that we can make no specific recommendation on the establishment of group pharmacies, we are prepared to accept that the future trend of hospital pharmacy may be in this direction and that, in particular, the post of singlehanded chief pharmacist may become a rarity, we consider that the establishment of Group Chief Pharmacist posts is the first essential step both towards co-ordinating the pharmaceutical service as it exists at present and also preparing to direct and control its future development.

96. There is a further point arising from the group organisation of the hospital pharmaceutical service to which we feel we should give attention. A number of small hospitals, particularly in the more remote areas, which are not of a size to justify the employment of a full-time pharmacist receive help part-time from pharmacists who are often at some considerable distance from them and employed by a different Board of Management. In such cases, we feel that the pharmaceutical organisation should be flexible enough to override the strict boundaries laid down by the grouping of hospitals under Boards of Management, and that no hospital should be without the advice of a pharmacist. Any additional responsibility which chief pharmacists assume under these conditions should be sufficiently recognised for salary purposes.

97. Having reached our conclusions on Group Chief Pharmacists we next had to consider what, if any, organisational structure was required to facilitate the co-ordination of the hospital pharmaceutical service on a regional basis. The suggestion was made in evidence that there would be advantage in establishing in each region the post of Regional Pharmacist. Although initially attracted to this proposition, detailed consideration convinced us that its only real merit would be to improve the career structure of hospital pharmacy. Supplies and planning are aspects which would help to justify the establishment of the post of Regional Pharmacist but these are already the subject of central arrangement and guidance respectively. Indeed, so long as the pharmaceutical service rests on a group basis under the day to day control of Boards of Management with its own professional group heads there would appear to be little room for continuous external co-ordination or for a level of advice above that of the Group Chief Pharmacist. While we recognise that many specialist functions in the hospital service are successfully co-ordinated at regional level and that in recent years there has been a tendency towards increasing centralisation, we are suspicious of any form of professional direction which is solely administrative and not pharmaceutical in nature. A Regional Pharmacist might well come to be accepted by the Board as the sole channel of advice on pharmaceutical matters and at the same time might lose the confidence of his colleagues in the hospitals because he had no specifically pharmaceutical function and therefore no means of refreshing his own knowledge or keeping in touch with the professional views of other pharmacists. We feel therefore that hospital pharmacy is in an essentially different position from, for instance, hospital engineering or catering and we do not favour the appointment of Regional Pharmacists.

98. We do consider, however, that there are two fields which are not explicitly covered by the existing arrangements and could not be dealt with by Group Chief Pharmacists acting on their own behalf: firstly, the need from time to time

to co-ordinate or rationalise the activities of the pharmaceutical service on a basis beyond that of the single hospital group and, secondly, the giving of advice to the Regional Hospital Boards on pharmaceutical matters. There already exists in the West of Scotland an alternative form of organisation for meeting problems at Regional level — the West of Scotland Pharmaceutical Advisory Committee.

99. We are satisfied that such a body is well suited to deal with those problems of pharmacy which call for a regional solution. It has no executive function, acts solely as a forum for discussion and comprises all chief pharmacists representative of the main groups in the Region. It has been partially recognised by the Regional Hospital Board, and its opinions and views on all matters concerned with hospital pharmacy are normally sought and given consideration by the Board. The minutes of all meetings are circulated to all chief pharmacists in the Region, who are thereby kept fully informed of current events.

100. We would recommend, therefore, that the remaining Regional Hospital Boards should give consideration to the question of setting up Advisory Committees of this kind. The membership might well follow the pattern of the existing committee and include all the chief pharmacists of the main groups in the Region. In addition to advising on pharmaceutical matters of regional interest referred by the Boards, and initiated by the committees themselves, we visualise that a committee of this type could most usefully advise on, and keep under review, arrangements in the region for post-graduate study by pharmacy students and for the training of dispensing assistants and other auxiliary staff.

101. It seems clear to us that a body of this type with the range of duties which we have suggested, would prove most valuable and we would, therefore, press for the setting up of Advisory Committees in all Regions with the full co-operation of the Regional Boards. The Committees would no doubt make their own arrangements about the frequency of their meetings. Since, however, a remit connected with questions of general organisation and policy is unlikely to throw up matters of pressing urgency, we recommend that the committees should meet at regular intervals and with reasonable frequency to prevent their functions falling into neglect.

CHAPTER VII

Staffing and Salary Scales

102. In previous sections of this report we have considered matters which are of fundamental importance to the staffing of the pharmacy. We have out-lined the scope of the pharmaceutical service as we see it, emphasised the professional status of the pharmacist, made recommendations on his duties and responsibilities and noted that, in future, most pharmacists will qualify by obtaining a university degree. We have also recommended the introduction of posts for group chief pharmacists and are convinced that, if properly applied, the new grading structure of basic grade pharmacist, senior pharmacist, deputy chief pharmacist, chief pharmacist and group chief pharmacist should offer an improved career structure. We wish now to consider the present recruitment of pharmacists to the service and to consider the possible future effect of the

recommendations which we have already made. This seems an essential next step since the use, recruitment and training of auxiliary staff in the pharmacy which follows after must be viewed against the background of the availability of the pharmacist.

Present and Future Recruitment of Pharmacists and Promotion Procedures

103. It was repeatedly put to us in evidence that the service was neither attracting nor retaining a sufficient number of pharmacists and that men and and women of outstanding professional ability, who could eventually be expected to fill the most senior posts with distinction, were seeking employment outside the hospital service. In view of the weight of evidence we felt it proper to examine both these points.

104. The most recent survey of the staffing of the Scottish hospital pharmaceutical departments made available to us showed that one-third of the established basic grade posts for pharmacists were vacant at 1st August, 1964 and at a later date a very large proportion of the established posts for post-graduate students were also unfilled. In the first category two-thirds of the vacancies had been unfilled for at least six months and one-third for at least twelve months. We regard the result of this survey as the most depressing single piece of evidence placed before us.

105. On the second point, we carried out an enquiry into the further careers of graduates in pharmacy of a Scottish university who had carried out their required period of practical training in a hospital pharmaceutical department during the years 1952-62. From the 60 answers received it emerged that only 19 of the graduates were still employed in hospital pharmacy and 41 had moved to other employment or were not employed. Of these 41, 25 specifically stated that they had left because of an offer of a better salary, sometimes also giving other reasons.

In an elaboration of the same survey an attempt was made to assess what type of graduate did, in fact, stay in hospital pharmacy and here again it was found that outside employment had a greater relative appeal for graduates with first or second class honours. Thus it was found that 5 of the 19 graduates who stayed in hospital pharmacy had first or second class honours while 20 of the 41 engaged in outside employment or unemployed had this type of qualification.

106. From these investigations we have drawn the following conclusions:

(i) the recruitment of pharmacists to the Scottish Hospital Service is so inadequate that corrective action should be taken as a matter of urgency;

and

(ii) a qualitative shortage leading to insufficient candidates of the right calibre for the foremost posts in the service will be inevitable unless a greater number of honours graduates than hitherto can be permanently recruited to the hospital pharmaceutical service.

It is important in our opinion that the most senior posts should be filled in future by honours graduates and we have been impressed by the extent to which better salaries elsewhere have attracted such graduates away from the hospital service.

107. We are hopeful that the enhanced professional standing of the hospital pharmacist which we envisage and the improved career prospects which would

follow the introduction of the post of Group Chief Pharmacist would, in time, make hospital pharmacy more attractive. We think its attraction will increase the more it is seen to be a national service with promotion prospects freely available on merit throughout Scotland and, indeed, by interchange, throughout England and Wales as well. In this respect we are of the opinion that the system whereby independently appointed professional assessors assist Boards of Management in the making of senior administrative and nursing appointments could usefully be extended to the hospital pharmaceutical service. This system should help to ensure that available posts are filled in such a way that each post plays its part in the development and training of individuals of good potential in the broad interests of the service rather than on the narrow criterion of immediate local need. We recommend that the assessor system apply to all posts of deputy chief pharmacist and above.

108. Although we expect our recommendations to improve the attraction of hospital pharmacy as a career, this improvement may well come about gradually. Moreover, one possible result of the new training arrangements set out in Chapter IV may be to reduce rather than increase the number of pharmacists in the immediate future. If this were to occur, the present competition between the hospital service and industry and commerce would be aggravated and our recommendations would enable hospital pharmacy to do no more than hold its own. In our opinion this will not be sufficient.

Use, Recruitment and Training of Auxiliary Staff

109. As in other professions the pharmacist can be assisted by auxiliary staff working under supervision on well-defined tasks subordinate to the professional role. We regard it as essential that effective arrangements should be made to recruit, train and use auxiliary staff to the maximum in support of the pharmacist. Indeed, while adequate recruitment of pharmacists must be the primary objective, success in the recruitment and training of auxiliary staff is also crucial to the present and future efficiency of the hospital pharmaceutical service.

110. Of the auxiliary staff who can be included in the pharmacist's team the service depends most upon the dispensing assistants, but, in our opinion, the importance of the supporting role of this grade has been insufficiently recognised. Duties have varied from pharmacy to pharmacy, until recently there have been no formal training arrangements in Scotland; and the remuneration seems unattractive. There has been little incentive, therefore, to enter the grade and recruitment has been haphazard. Unless corrective action is taken recruitment can be expected to deteriorate still further at a time when, as we shall show, greater numbers than before can be used.

111. One indication that this unsatisfactory state of affairs has not gone unnoticed was the introduction in 1962 by the West of Scotland Pharmaceutical Advisory Committee, in collaboration with the West of Scotland Committee for Technical Education, of a course for "dispensing technicians" in Paisley Technical College (now held in David Dale Technical College, Glasgow). We welcome the course as a step in the right direction. We hope that similar courses will be established in other areas or, better still, that a national scheme for the training of dispensing assistants may be introduced as, we understand, is at present under consideration by the Pharmaceutical Society in collaboration with

other bodies. We recommend that the appropriate hospital authorities should assist with the establishment of such courses wherever possible, that hospital pharmacists should participate in the training and that day release facilities should be granted to trainee dispensing assistants should these be required.

112. We are glad to note that the additional salary allowance payable in terms of P.T.B. Whitley Council Circular 156 has been approved for payment to those students who have been successful in the West of Scotland course. We are doubtful, however, whether this additional payment will be sufficient to ensure that all who could take such a course will be encouraged to do so. Accordingly we hope that the Whitley Council concerned will keep the position under close review, particularly if a national training course is established.

113. One of the essentials for the success of such courses is a sufficient number of students and we have, for this reason and also in relation to the immediate needs of the service, considered what the future employment possibilities are for dispensing assistants in the hospital pharmaceutical service. The effective limit to the numbers of this grade who can be employed depends upon the number of dispensing assistants who can be supervised by a pharmacist since, as we said in paragraph 109, all auxiliary staff must be so supervised. At present the evidence which we have shows that the average ratio of pharmacists to dispensing assistants is about one to one. We consider that the ratio could be increased to allow one pharmacist to supervise two assistants and still permit adequate supervision to be given. We exclude chief pharmacists for this purpose since, in the larger pharmacies at least, the chief pharmacist should be carrying out duties other than the supervision of assistants. On this basis it would appear that the service could employ about 200 assistants or some 70 more than at present. The proportion of this total likely to be in training at any one time might well prove insufficient to support training facilities at any but the larger cities. Nevertheless, the pharmaceutical service may well have to look to an expansion of this grade as one way in which some of the pressure on pharmaceutical staff could be eased and, if this were to happen, the number of trainees would almost certainly justify the establishment for the next decade of the training facilities we look forward to.

114. We anticipate that the duties of dispensing assistants will be the subject of gradual change according to the influence of the training programme and the availability of pharmacists. To begin with, however, we would include the following as being among the duties which this grade of staff could carry out under effective supervision. By effective supervision we mean that the dispensing assistants should be employed only where a professional pharmacist will be continually available.

(i) routine manufacturing;
(ii) pre-packing of pharmaceuticals;
(iii) filling and sealing of ampoules;
(iv) packing of sterilised preparations;
(v) dispensing of certain medicines;
(vi) preparing ward stock boxes;
(vii) filling stock bottles;
(viii) breaking down of bulk supplies;
(ix) routine work in central syringe service or C.S.S.D.

115. Given duties of the kind outlined above, a formal training programme and financial recognition once trained, the recruitment potential of the dispensing assistant grade should be considerably enhanced. Chief pharmacists would have reasonable expectations of being able to compete successfully for a proportion of those school leavers who, while not able or not prepared to train for full qualification, are yet anxious to learn to do a worth-while job. Initial success in recruitment is only the beginning, however, and much will depend on the willingness and ability of the pharmacists to make their assistant colleagues feel a member of the team whose contribution is valuable and valued.

116. Apart from dispensing assistants the other auxiliary staff we have in mind are porters, storemen, clerks and typists. It is a misuse of professional time if the pharmacist is employed in carrying out duties appropriate to these grades and, in the interests of economy and overall efficiency, it is essential that he should not. In group or other large pharmacies there should be no difficulty in ensuring that the necessary staff are made available since duties can be broken down into well defined routines, each demanding the employment of full-time staff. In the smaller isolated pharmacies, however, the position may be more difficult. In such instances it may be possible for staff to be shared with other departments within the hospital or, as we have earlier recommended, for some centralisation of functions to be agreed with other pharmacies within the group if full centralisation on a group basis is not practicable. We recommend the provision of auxiliary staff of the kind mentioned in sufficient numbers to ensure that pharmacists will be employed on professional duties. In making this recommendation we are aware that it may hasten the trend towards greater centralisation of pharmacies or of functions between pharmacies.

Salary Scales

117. Although the question of salaries has arisen frequently during our discussion, and we have given much thought to the subject, we have very reluctantly come to the conclusion that, as a separate body exists to negotiate these, it is not appropriate for us to express our views in this report. Nevertheless it is clear from our evidence that salary scales have aroused strong feelings within the pharmaceutical profession. It is obvious that unless conditions of service are made sufficiently attractive the structure of the Hospital Pharmaceutical Service which we recommend in this report will not be attainable. We are concerned, however, that many chief pharmacists should find their pharmaceutical staffing resources so strained that they can only satisfy the most immediate day to day demands and that chief pharmacists themselves have been so overburdened by the weight of trivia that their broader professional function has gone by default.

118. Towards the end of our deliberations a new salary award was announced (Ph Circular No. 35) which has made much of the evidence submitted to us out of date. Our first reactions to these new salary scales are guardedly favourable, but it is too early at this stage to judge what effect the award is likely to have in recruiting staff or in allaying the discontent of those who are already in post.

Acknowledgments

119. We must express the great loss which the Committee sustained by the death of Mr Edward Scorgie in October, 1964. In addition to his own attractive personality, he brought to our discussions his experience as the Chairman of a

Board of Management together with his valuable professional knowledge of economics. We valued his help tremendously during the early stages of our deliberation.

We are indebted to Mr J. M. Scoular for his enthusiasm and administrative guidance and for the excellent arrangements he made for our visits to hospitals. We were sorry to lose his services also in October, 1964. Mr M. B. Caswell, who replaced Mr Scoular, rapidly became familiar with our problems and we thank him also for the help he has given us during the past year.

CHAPTER VIII

Summary of Main Recommendations

General

1. The hospital pharmacist should undertake only those responsibilities and duties which are strictly related to his professional function and should be accorded the status in the hospital organisation which properly belongs to that function. These duties include the purchase, storage, preparation and dispensing of medicines and the giving of advice and guidance on matters pertaining to pharmacy. (Paragraphs 47-62).

2. In addition to his strictly professional function, the hospital pharmacist should accept only such further duties as will not prejudice his professional work and only such duties as fall within the scope of his professional training and experience. Supporting staff should be provided for this purpose. These subsidiary duties should generally include responsibility for the purchase, storage and issue of surgical dressings, instruments and sundries. (Paragraphs 63-68).

3. In order that the pharmacist should be an effective adviser to hospital staff, hospital authorities should arrange for pharmacists in their employment to attend regular refresher courses, should make financial assistance available for the purchase of journals and reference books and for the establishment of a pharmaceutical reference room and should accept the need for part of the pharmacists' working time to be spent in improving his professional knowledge. (Paragraphs 54-62, paragraph 80).

Organisation and Administration

4. The pharmaceutical service should normally be organised on a group basis and a Group Chief Pharmacist appointed. In groups based on a single pharmacy he should be formally designated with this title. In other groups the Group Chief Pharmacist should be a hospital chief pharmacist who has in addition defined responsibilities for the organisation of the pharmaceutical service in the group of which his hospital is a part, for establishing a balanced staff of pharmacists, for co-ordinating supplies procedures and for giving advice on relevant matters of policy. (Paragraphs 86-93).

5. Pharmaceutical Advisory Committees should be set up in all Regions on the pattern of the West of Scotland Pharmaceutical Advisory Committee to deal with those pharmaceutical problems which call for a regional solution and

to undertake a general supervisory function in relation to training. (Paragraphs 97-101 and paragraphs 77-78).

6. Where pharmacists are responsible for the pharmaceutical provision in small hospitals outside their own Board of Management, this extra responsibility should be fully recognised. No hospital should be without the advice of a pharmacist. (Paragraph 96).

Hospital Dispensing

7. Ward stocks of drugs should be requisitioned on an order signed by a registered medical practitioner or a registered nurse or midwife. (Paragraph 26).

8. The hospital pharmacy should continue to dispense for out-patients in cases of urgent need; to cover patient's requirements until they can obtain a supply through their general practitioners; in cases where drugs are required for special clinics or in clinical trials or are difficult to obtain; and for casualties. All drugs supplied for these purposes should be dispensed, suitably packed and labelled, by the hospital pharmaceutical department. (Paragraphs 27-38).

9. The establishment, maintenance and control of ward stocks should be among the responsibilities of the hospital pharmacist; he should regularly review them, withdraw unnecessary stock and replenish when indicated. (Paragraphs 23-25 and paragraph 52(4)).

10. When drugs are supplied in pre-packed containers to out-patient clinics, the hospital pharmacist should strictly control the type of preparation which can be handed out in this manner. (Paragraph 37).

Planning

11. Professional advice should be sought from pharmacists in the planning of new departments and chief pharmacists should be consulted from an early stage. (Paragraph 84).

12. Planning should be undertaken on the basis of work-flow; the pharmacy department should be situated where possible on one floor and sited in a position to facilitate the distribution of supplies to the wards. (Paragraph 84).

13. In the larger hospitals, facilities in the department should include a dispensary with separate service areas for in-patients and out-patients, the manufacture of sterile and non-sterile products and separate office accommodation for the pharmaceutical and clerical staff. (Paragraph 84).

Staffing and Training

14. Universities should offer the opportunity for a hospital chief pharmacist to deliver lectures and for students to visit hospital pharmacies. (Paragraph 74).

15. Facilities should be readily available in all regions for the in-service training of students. Such training should be fully comprehensive and should take place only in those hospitals which have a sufficient range of facilities to make it so. The financial allocation for this training should be made on a regional basis to be transferred to the individual hospital or group as the need arises. (Paragraph 76).

16. A post-graduate diploma in hospital pharmacy should be instituted; it should be open to registered pharmacists who have completed a certain length

of time in hospital pharmacy and might include advanced pharmaceutics, pharmacology and administration. (Paragraph 81).

17. The pharmacist should play a part in the training of nurses and medical students in the subjects on which he is an expert. (Paragraph 61).

18. Hospital authorities should assist where possible with the setting up of courses for training dispensing assistants and grant day release facilities should they be required. Hospital pharmacists should participate in the training of dispensing assistants. (Paragraph 111).

19. For posts of deputy chief pharmacist and above, a system of independently appointed professional assessors should be adopted to assist Boards of Management in the making of appointments. (Paragraph 107).

20. Dispensing assistants should work under the effective supervision of a pharmacist; in practice this implies a ratio of some 2 dispensing assistants to each pharmacist, excluding chief pharmacists. (Paragraph 113).

21. Auxiliary staff should be provided in sufficient numbers to ensure that pharmacists will be employed only on professional duties. (Paragraph 116).

22. Conditions of service should be made sufficiently attractive to ensure that our recommendations are attainable. (Paragraph 117).

(Signed) JOHN B. GROSSET (Chairman)

J. KILLOCH ANDERSON

ANNIE J. DICK

JAMES S. LEY

A. H. MCCALL

ALASTAIR G. MACGREGOR

GEORGE H. MACMORRAN

ELIZABETH A. MEIKLE

KENNETH B. STEWART

November, 1965.

APPENDIX I

List of those who gave evidence

Pharmaceutical Bodies

Guild of Public Pharmacists
Guild of Public Pharmacists — Edinburgh and East of Scotland Branch
Guild of Public Pharmacists — Glasgow and South West of Scotland Branch
West of Scotland Pharmaceutical Advisory Committee
Pharmaceutical Society of Great Britain, Scottish Department
Association of the British Pharmaceutical Industry

Other Bodies

Association of Scottish Hospital Boards of Management
Association of Scottish Hospital Matrons
Association of Scottish Hospital Matrons, North-Eastern Group
Board of Management for Glasgow South-Western Hospitals
British Medical Association
Institute of Hospital Administrators
Royal College of Physicians, Edinburgh
Royal College of Physicians and Surgeons, Glasgow
Scottish Association of Medical Administrators
Society of Apothecaries of London
Surgical Dressings Manufacturers' Association
Northern Regional Hospital Board (Scotland)
North-Eastern Regional Hospital Board (Scotland)
Eastern Regional Hospital Board (Scotland)
South-Eastern Regional Hospital Board (Scotland)

Individuals

Professor R. B. Hunter, Department of Pharmacology and Therapeutics, Queen's College, Dundee.
Professor Stanley Alstead, Department of Materia Medica and Therapeutics, The University, Glasgow, W.2.
Professor Alastair G. Macgregor, Department of Materia Medica and Therapeutics, University Medical Buildings, Foresterhill, Aberdeen.
Sir Derrick Dunlop, Emeritus Professor of Materia Medica and Therapeutics, Edinburgh.
David W. Blackwood, Chief Pharmacist, Stobhill General Hospital, Glasgow, N.1.
Thomas Bradley, Chief Pharmacist, Victoria Infirmary, Glasgow, S.2.
Adam Roxburgh, Chief Pharmacist, Royal Infirmary, Glasgow, C.4.
Andrew Sharkey, Chief Pharmacist, Western Infirmary, Glasgow, W.1.
*J. A. Myers, Group Chief Pharmacist, Royal Infirmary, Edinburgh.
*Professor John B. Stenlake, Royal College of Science and Technology, Glasgow.
†Dr J. M. Johnston, Scottish Home and Health Department.
†W. Mott, Guild of Public Pharmacists.
†And the Medical, Nursing, Pharmaceutical and Administrative Staff of the hospitals we visited.

Those marked with an asterisk gave oral as well as written evidence.
Those marked with a dagger gave oral evidence only.

APPENDIX II

List of hospitals visited

Stirling Royal Infirmary
Perth Royal Infirmary
Edinburgh Royal Infirmary
Stobhill General Hospital
Dundee Royal Infirmary
Aberdeen Royal Infirmary
Royal Northern Infirmary, Inverness
Dr Gray's Hospital, Elgin
Crumpsall Hospital, Manchester
Manchester Royal Infirmary

Board of Management visited

Greenock and District Hospitals

APPENDIX III

Prescribing and administration of drugs

The procedures described below for the prescribing and administration of drugs will be used in the Aberdeen General Hospitals. This scheme has been evolved with the following objects in mind:

- (i) Elimination as far as possible, of errors in administering drugs.
- (ii) Fulfilment of legal obligations.
- (iii) Uniformity of procedure (advantageous because of movement of nursing and junior medical staffs between wards).
- (iv) Practicability.
- (v) Economy of effort.
- (vi) Flexibility to allow some individuality of prescribing.
- (vii) Creation of good records.

I. Prescribing — General

Drugs should not be administered without a written prescription by a doctor, except in an emergency. In the event of a drug having to be given by a nurse in an emergency without written authority, it should be immediately recorded on the Prescription Sheet (see II (1.) below) and certified by the doctor within 24 hours. In general, no medicines should be given by a nurse in the absence of a written prescription, although consultants may still choose to authorise senior nursing staff to give medicines, e.g. aperients. In these circumstances, this authority should be recorded by the doctor on the patient's prescription sheet under the appropriate section and the administration recorded by the nurse on the nursing report for the doctor to see. It is obvious that this procedure cannot be followed in the case of D.D.A. or Schedule I poisons.

II. Prescribing — Records

1. Prescription Sheet*

All prescriptions for drugs will be recorded on a standard prescription sheet which will replace the bedside treatment chart, the Kardex treatment sheet, the medicine list and the sedative book. In this way, transcribing errors will be avoided.

Prescription sheets will be kept together in separate holders for male and female ends of each ward, and when it is wished to ascertain the treatment an individual patient is receiving reference can be made to the collective drug records. The decision to retain bedside treatment charts as a record in addition to the prescription sheet will be left to individual consultants.

The Prescription Sheet is made up of the following features:

(a) *Date Column*

Drugs should not be prescribed prospectively and, as far as possible, the "date commenced" and the "date given" should be synonymous with the "date prescribed".

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* The Prescription Sheet is divided into two main sections, one for "Once Only" and the other for Regular Prescriptions, each main section being subdivided for Parenteral and Other Drugs. Distinctive colouring of the subdivisions will facilitate the preparation of medicine rounds.

(b) *Description of Drugs*

Since the Prescription Sheet will also be used for the administration of drugs, it is even more important that prescriptions should be legible, and for this reason the description of all drugs prescribed should be printed in block letters. The approved name should be used wherever possible.

(c) *Dose Column*

All drugs will be prescribed, using the metric system and, to facilitate this, a conversion table showing approximate metric and imperial equivalents is provided on the form.

(d) *Times of Administration and Abbreviations*

A single column for "Once Only" drugs and multiple columns for Regular drugs are provided for indicating the times of administration. In the case of regular prescriptions, times should be indicated either by entering a cross in the timed columns or by writing the actual time in the spare columns when the time is not a standard one. This arrangement will allow the nurse to scan the columns quickly when she is preparing a medicine round. Furthermore, a timed indication of administration avoids the use of inexact abbreviations such as t.d.s., q.i.d., etc.

There is a great deal of confusion about the exact meaning of other commonly used abbreviations such as "P.R.N." (pro re nata) and "S.O.S." (si opus sit), and they should not be used. All prescribing instructions should be written in English, e.g. "as required for headache", across the columns.

(e) *Method of Administration*

When a drug is prescribed, the route should be indicated in the "Method of Administration" column and abbreviated as follows:

IV — intravenous
IM — intramuscular
SC — subcutaneous
SL — sublingual
TOP — topical
PR — rectal
INHAL — inhalation

"Oral" and other forms of administration should be written in full.

(f) *Signature*

A full signature should be written for each prescription.

(g) *Discontinuing drugs*

In the case of regular prescriptions, when a drug is discontinued, the date should be indicated in the Discontinued Column and the entry initialled. In addition, to avoid errors in the preparation of medicine rounds and in the administration of drugs, a single straight line should be drawn through the complete entry. A small ruler will be attached to each holder for this purpose.

In cases where it is necessary to cancel an entry for any reason, the word "CANCEL" should be printed boldly across the entry which should also be deleted by a straight line.

(h) *Identification of Patient*

To enable a prescription sheet to be readily identified, the patient's name, age, unit number and the name of the consultant in charge of the case should be written in the spaces provided at the foot of the form. A space is also provided for recording drugs to which the patient is known to be sensitive.

(i) *Procedure when Additional Lines required for Prescriptions*

When all available lines in a section have been filled, further prescriptions should be entered on the reverse side of the form where a second prescription sheet has been provided. As soon as the reverse side is brought into use, a red plastic signal should be attached to the foot of the form.

2. Anticoagulant Sheet

Anticoagulant drugs present a special recording problem because of the frequent changes in dosage required. A form (specimen copy attached) for prescribing Phenindione or similar anticoagulants has been devised which allows the "prothrombin time", as a ratio of control, to be charted and indicates the therapeutic range.

3. Insulin and Hypoglycaemic Drugs

The type of insulin, and the times of administration should be prescribed on the prescription sheet, but the dose should be prescribed on the diabetic chart which will also contain results of urine and blood sugar tests. The original prescription on the prescription sheet should be signed and any change in dose on the diabetic chart initialled. Any description of insulin dosage based on a sliding scale of urine tests should be for the guidance only of the doctor and not used as a prescription.

When the type of insulin or the times of administration are changed the original prescription on the prescription sheet should be discontinued and a new prescription written. The above recommendations also apply to the hypoglycaemic drugs, such as tolbutamide, chlorpropamide, etc.

4. Oxygen Therapy, Intravenous Fluids, Diet and Physiotherapy

A special place has been allocated on the prescription sheet for diet to be recorded if desired.

Oxygen therapy should be prescribed as for other drugs and any instructions written across the "Times of Administration" columns. A general prescription for intravenous fluids should be written as for oxygen, but the details of the fluids to be given recorded elsewhere (the fluid balance chart) in a similar way to insulin and anticoagulants. In the case of physiotherapy, the requisition sent to the Physiotherapy Department can be considered as the prescription and a copy kept in the patient's case sheet.

5. Immediate Pre- and Post-Operative Medication

Immediate pre- and post-operative medication should be regarded as part of an anaesthetic and as such should be prescribed by the anaesthetist concerned (or exceptionally by a medical deputy on the anaesthetist's instructions). The name of the drugs prescribed should be printed in full in block letters.

6. Special Tests involving the Use of Drugs

In those cases where drugs are used as an integral part of a diagnostic test or procedure, it would be appropriate to use the relevant section of the prescription sheet, e.g. ACTH stimulation test.

In other cases where the tests are complicated, e.g. block histamine test meal, the case-sheet itself should be used for recording.

7. Drugs Prescribed at Non-Standard Intervals

When drugs such as mersalyl, Vit. B.12, etc., are prescribed, the frequency of administration should be clearly written across the "Times of Administration" columns.

8. Intensive Care Patients

In situations where seriously ill patients require frequent observation and special nursing, the prescription sheet can remain at the bedside, together with the temperature and blood pressure charts, particularly when a frequent change of medication is necessary.

9. Patients Discharged or Transferred to the Convalescent Hospital

When patients are discharged home, a statement of "immediate treatment" should be sent to the General Practitioner by the doctor. When a supply of a drug is to be given to an in-patient who is being discharged, the drug should be packed and labelled by the Pharmaceutical Department.

In the case of patients transferred to the Convalescent Hospital, care should be taken that the prescription sheet is included in the case-notes.

III. ADMINISTRATION OF DRUGS BY THE NURSING STAFF

Every medicine, whether or not it be a Dangerous Drug or Schedule I poison, should be checked against the prescription (i.e., the Prescription Sheet) at the bedside immediately before administration.

The following method is recommended:

(i) Read the prescription carefully.
(ii) Ensure that the prescribed dose has not already been administered.
(iii) Select the drug required and check the label with the prescription.
(iv) In the case of Dangerous Drugs, prepare the drug in the presence of a witness who should check with the prescription (a) the drug, (b) the calculation, if any, (c) the measured dose, and (d) the name of the patient.
(v) Take the measured dose and the prescription to the bedside, check the identity of the patient and administer the drug.
(vi) Enter the details of any Dangerous Drugs administered in the "Nursing Reports" section of the "Kardex" system for the appropriate patient. These details should also be entered in the Ward Dangerous Drugs Record Book. Both these records should be signed in full by both donor and witness.

When D.D.A. drugs and Schedule I poisons are to be administered at night, these drugs should be administered and checked by two persons. It is therefore important that the Night Sister of registered nurse should be called when a dangerous drug has to be administered. For Schedule I poisons, a second nurse on the ward should check the drug with the prescription and witness its administration. If at any time the nurse is in doubt about the administration or checking or the drug, the Night Sister should be called.

December, 1963

APPENDIX IV

Questionnaire sent to Boards of Management

SCOTTISH COMMITTEE ON THE HOSPITAL PHARMACEUTICAL SERVICE — QUESTIONNAIRE

PART I

Name of Hospital
Type
Staffed Beds and Average Duration of Stay

Factual Information

Staffing of Pharmaceutical Department

1. Name and qualifications of Chief Pharmacist.
2. Age and length of service
   - (a) Age
   - (b) Length of Service
     - (i) in hospital service;
     - (ii) as Chief Pharmacist
   - (c) Grading.
3. Number of Pharmacists employed

Grading	Age	Sex	Length of Hospital Service		In present grade	
			Years	Months	Years	Months

4. Number of pre- or post-graduate students.
5. Assistants-in-dispensing.

Number	With Certificate of Society of Apothecaries	With other Qualifications	No. Qualifications

6. Number of clerical staff

Full-time	Shared

7. Number of clerical staff with special qualifications or experience (please detail).
8. Number of Porters.
9. Number of other staff.
10. Is the establishment sufficient for the needs of the Department?
    (a) Yes.
    (b) No. (If no, what is the reason).
11. If the Pharmacist is responsible for the supply to other hospitals in the group, detail these hospitals giving:

Name of Hospital	Type of Hospital	Bed Complement	Ancillary Staff

Size and Planning of Pharmaceutical Department

12. What is the approximate size in sq. ft. of the Pharmacy Department and how is it distributed? Please detail as below.

Dispensary	Drug Store	Dressings Store	Offices	Laboratory	Small Scale Manufacture	Surgical Sundries

13. Is this sufficient for (a) present, (b) future needs?
    (a) (i) Yes.
        (ii) No.

    (b) (i) Yes.
        (ii) No.

    (If no in either case, please give reasons).

14. Please detail the facilities for (a) small scale manufacture, (b) sterilisation. In each case indicate the type of preparation made.

15. Does your hospital have any re-building plans for the future?
    (a) Yes.
    (b) No.

16. If so, does this involve a new or extended Pharmacy Department?
    (a) Yes.
    (b) No.

17. At what stage would the Chief Pharmacist participate in any re-planning?
    (a) In the preparation of the schedule of accommodation.
    (b) At sketch plan stage.
    (c) Final details.
    (d) Comments (if any)

18. What is the annual total out-patient attendances?

19. How many out-patient prescriptions are dispensed per annum?

20. Annual expenditure of Pharmaceutical Department in each hospital

Hospital	Drugs		Dressings		Surgical Sundries		Surgical Instruments		Disposable Equipment		Miscellaneous	
	1959/60	1960/61	1959/60	1960/61	1959/60	1960/61	1959/60	1960/61	1959/60	1960/61	1959/60	1960/61

PART II

Responsibility of and Duties Carried out by Chief Pharmacist

(1) TRAINING OF STAFF

21. What part does the Chief Pharmacist take in the training of (a) Medical Students, (b) Nurses, (c) Assistants-in-dispensing.

	Medical Students	Nurses	Assistants-in-Dispensing
Organised series of lectures			
Occasional lectures			
Demonstrations			

22. What liaison is there with the local College of Pharmacy?
    (a) Practical training for students from the College in the Pharmacy Department.
    (b) Lecture(s) on hospital pharmacy by the Chief Pharmacist.
    (c) Any other (please detail).
23. If there is no establishment for student pharmacists state why.

(2) RANGE OF SERVICES PROVIDED

24. Are the Pharmacist's duties solely related to the supply of medicines?
    Yes.
    No.
    If not, what additional functions does he fulfil?
25. Please detail arrangements for a 24-hour service.
26 If there is only one Pharmacist on the staff, what arrangements are made if he is ill or on holiday?
27. Please detail the facilities for storage and disposal of disposable equipment.
28. Is there any research work done in the Pharmaceutical Department?
    Yes. No.
    If yes, what type of research?
    If not would it be done if facilities (e.g. premises, equipment, and time) were available?

(3) METHOD OF PROVISION OF SERVICES

29. What are the arrangements for the transport of drugs to (a) the ward, (b) other department or (c) hospital ordering them?
30. Are ward orders for Dangerous Drugs signed by —

(a) A Doctor	(b) A Sister	(c) A Registered Nurse

31. What is the system for the supply of drugs to patients leaving hospital?

(a) Supplies direct from Pharmacy	Hospital R.B.P. Forms	Supplies given by wards	Instructions to Patient's G.P.

Any other (please detail).

(b) If given at ward level, how many days supply is given, and how are the drugs packed and labelled?

32. Are there any hospitals outwith the Board of Management's control for which a Chief Pharmacist has responsibility as regards the checking of dangerous drugs, etc.? If so, state names of hospitals.

33. List any hospitals in your area that have no official contact with a hospital Pharmacy. In each case detail the method of obtaining supplies.

Hospital	Details

(4) SUPPLIES — RECEIPT

34. Are the Pharmacist's orders countersigned by any other members of the Staff? No./Yes. If yes, by whom?

35. Is the Chief Pharmacist directly responsible for invoice receipt and checking? Yes./No. If no, who is?

36. What is the system of stock control (please detail).

(5) ECONOMY IN PRESCRIBING

37. Is the Chief Pharmacist a member of the Hospital Prescribing Committee or other Committee with the same general function? Yes.
No.

38. Is Recommendation 2 of the Douglas Report* implemented in your hospital, and does the Chief Pharmacist play a part in the courses organised? Yes.
No.

39. Is the Pharmaceutical Department encouraged to dispense identical equivalents for proprietary drugs?
(a) Yes.
(b) No.

40. Are doctors encouraged to use official or approved rather than proprietary names when prescribing?
(a) Yes.
(b) No.

41. (a) Do the pharmaceutical and the medical staff have access to the Prescribers' Journal?
(a) Yes.
(b) No.

(b) Do they have access to the "Medical Letter" (the Drug and Therapeutics Bulletin)? (The Medical Journal in the U.S.A. with the same general functions and now published in Britain).
(a) Yes.
(b) No.

42. What action has been taken in your hospital on recommendation 22 of the Douglas Report?*

Miscellaneous

43. Is there any special feature about the Pharmaceutical Department of its functions which render it unusual (please detail)?

44. Is the Chief Pharmacist a member of the Control of Infection Committee (or any other Interdepartmental Committees in the hospital)?
Detail the Committees.
(a) Yes.
(b) No.

45. In assessing the staff grading for salary purposes are (a) attendance at out-patient departments (b) lecturing as in 21 recognised?
(a) (i) Yes (b) (i) Yes.
(ii) No. (ii) No.

46. Is there a Pharmacy Advisory Committee in your region?
(a) Yes.
(b) No.

PART III

Questions of Opinion

47. What are the Board's views regarding the scope of Hospital Pharmacy?

48. In the Board's opinion, how far is it desirable that dispensing for out-patients should be carried out?

49. In what way does the Board consider that economies within the Hospital Pharmaceutical Service could be introduced?

50. In the Board's opinion should more assistants-in-dispensing be employed?

51. If any section of the establishment is not up to strength, state which Section(s) and indicate whether it is because of
(a) Salary structure and career prospects.
(b) Other attractions in the district.
(c) Poor working conditions.
(d) Any other reason (please detail).

If there is any other relevant information which you think would be valuable to the Committee, you are invited to submit it along with this questionnaire.

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* Report of the Scottish Committee on Prescribing Costs (1959).

APPENDIX V

Analysis of replies to the questionnaire submitted to Boards of Management

The questionnaire was distributed in October 1962, and most replies were received by the end of November. In all, 68 questionnaires out of the total number of 78 sent out, covering 294 hospitals, are dealt with in this analysis. In general the main comment is that, even with the very specific questions asked, there was a good deal of room for variations in the type of reply which could be offered. Some of the individual answers therefore were rather difficult to fit in with the framework constructed in the tables. It is not thought however that this has significantly distorted the results.

Over all it was found that there were only 8 hospitals without any contact with a Pharmacist, but this is probably well below the figure for Scotland since only one Board for the Northern Region completed the questionnaire. A detailed survey was made of the factual information provided by the Boards in questions 1 to 46 of the questionnaires and the results are given in tables 1-25. The information analysed falls into five main categories — staffing, staff training, pharmacy size, services provided, and economy in prescribing.

Staffing

Tables 1-3 analyse the length of service of chief pharmacists and other pharmacists. Table 1 shows the length of service of chief pharmacists by sex and category. Table 2 shows the total length of service of other pharmacists broken up into periods of up to three years, over three to five years, over five to ten years, over ten to fifteen years, and over fifteen years. Table 3 indicates, in the same groupings, the length of service in their present grade of pharmacists other than chief pharmacists.

Staff Training

Tables 4 and 5 deal with staff training. Table 4 giving the type of training offered to medical students, nurses and assistants-in-dispensing by type of hospital. Hospitals are split into six categories for this purpose — Teaching, Mental, Hospital with a group pharmacy, Maternity, General and Special. Table 5 sets out the liaison with the local College of Pharmacy and the establishment for student pharmacists.

Pharmacy Size, Future Building Plans

Tables 6-12 analyse information received about the staffing and size of existing pharmacies and about future building plans. Table 6 shows, by type of hospital, the average staff complement of hospital pharmacies. Table 7 analyses these staff complements in terms of the number of beds served per member of staff. The ratio of 152 beds for special hospitals is a reflection of the very large number of beds (1,878) served by one hospital where there is a total group (Special Hospitals) of 6. Table 8 analyses the size of the pharmacy in terms of the number of square feet of pharmacy space per bed served. Table 9 analyses by type of hospital the ratio of square feet of pharmacy space per staff member; in each case the most favourable, the least favourable, and the average ratio is shown. Table 10 analyses the pharmacists' reaction to their present accommodation again by type of hospital. Table 11 deals with the amount of consultation with pharmacists in hospitals with re-building plans.

Services Provided

Table 13 details the total range of service provided analysed by the type of hospital, while Table 14 gives information in the same form for the small scale manufacture undertaken. These probably represent minimum figures and are subject to the disadvantage that variations in the method of recording the services mean; almost certainly, that a number of hospitals have not been credited with the full range of services which they in fact provide. Table 15 analyses the method adopted by hospitals to supply drugs to patients leaving hospital by type of hospital. Supply by wards analysed by type of hospital and by number of days' supply in Table 16. The total figures contain both supplies adequately labelled and supplies inadequately labelled and the figures for this latter method of supply are given in brackets underneath the table figure. Table 17 analyses the arrangements made when the pharmacist is ill or on holiday in single-handed pharmacies, analysed by type of hospital. Table 18 analyses in similar fashion the arrangements for a 24 hour service. Tables 19-21 deal with the method of transport of drugs within the Board of Management's area and with the method of signing for orders of dangerous drugs. Table 22 covers the research done or which might be done by the type of hospital. Tables 23 and 24 deal with the usage of disposable equipment.

Economy in Prescribing

Table 25 analyses by type of hospital, the answers to the questions dealing with economy in prescribing in the questionnaire.

STAFFING

TABLE 1

Length of Service of Chief Pharmacists by sex and category

Length of Service (Years)	Category and Sex													
	I		II		III		IV		V		NotStated		Totals	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Up to three	—	1	2	2	—	1	—	1	1	—	—	—	3	5
Over 3 – 5	—	1	—	2	1	—	—	—	1	—	1	—	3	3
Over 5 – 10	—	1	1	6	—	2	—	—	—	—	1	1	2	10
Over 10 – 15	—	3	—	4	5	1	4	1	1	1	—	—	10	10
Over 15	—	1	—	5	2	1	4	—	4	—	—	2	10	9
Totals	—	7	3	19	8	5	8	2	7	1	2	3	28	37

TABLE 2

Total Length of Service of Pharmacists other than Chiefs

Length of Service (Years)	Males	Females	Totals
Up to three	12	24½	36½
Over 3 – 5	1	17½	18½
Over 5 – 10	4	12	16
Over 10 — 15	4	6	10
Over 15	3	9	12
Totals	24	69	93

TABLE 3

Length of Service in Present Grade
(Pharmacists other than Chiefs)

Length of Service (Years)	Males	Females	Totals
Up to three	17	40	57
Over 3 – 5	1	10	11
Over 5 – 10	1	11	12
Over 10 – 15	2	5	7
Over 15	3	3	6
Totals	24	69	93

STAFF TRAINING

TABLE 4

Training of Medical Students, Nurses, and Assistants-in-Dispensing, by type of Hospital

Activity Undertaken	Type of Hospital						
	Teaching	Mental	Group	Maternity	General	Special	All Types
Organised lectures, students	—	—	—	—	—	—	—
Occasional lectures, students	1	—	—	—	—	—	1
Demonstrations, students	1	—	—	—	2	—	3
Organised lectures, nurses	1	3	4	—	4	2	14
Occasional lectures, nurses	4	3	2	1	2	1	13
Demonstrations, nurses	3	—	3	1	4	—	11
Organised lectures, assistants-in-dispensing	—	—	2	—	2	—	4
Occasional lectures, assistants-in-dispensing	1	1	3	—	2	—	7
Demonstrations, assistants-in-dispensing	3	3	4	—	5	—	15
No training shown	3	8	2	3	13	3	32

TABLE 5

Liaison with College of Pharmacy, and Establishment for Student Pharmacists, by type of Hospital

(A) Liaison with College	Type of Hospital						
	Teaching	Mental	Group	Mater-nity	General	Special	All Types
Practical Training of Students	4	—	3	—	3	—	10
Lectures on hospital pharmacy	1	—	—	—	—	—	1
Other forms of liaison	3	—	2	—	2	—	7
No liaison with any College	3	14	6	4	20	6	53
Hospitals with student pharmacist establishment	7	1	3	—	9	1	21
Hospitals without student pharmacist establishment	3	13	6	4	16	5	47

PHARMACY SIZE, FUTURE PLANS

TABLE 6

Staff Complements, by type of Hospital served by Pharmacy

Average Staff Complements	Type of Pharmacy					
	Teaching	Mental	Group	Maternity	General	Special
Pharmacists	5.1	1.2	2.8	1.1	2.1	1.5
Other Staff	12.3	1.3	7.0	1.0	3.2	2.2
	17.4	2.5	9.8	2.1	5.3	3.7
Range of Staff Complements	½ (Dr. Gray's and a few others) to 33 (Glasgow Royal)					
Range of size of Pharmacies	57 square feet to 5,240 square feet (Glasgow Western)					

TABLE 7

No. of Beds served per Staff Member, by type of Hospital

Beds per Member of Staff	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Most favourable ratio	29	315	30	50	44	25
Least favourable ratio	101	1176	199	95	366	626
Average ratio	52	524	90	79	99	152

No. of hospitals served from one pharmacy varies from 1 to 18

No. of beds served from one pharmacy varies from 78 to 2,356

TABLE 8

Square Feet of Pharmacy Space per Bed Served, by type of Hospital

Square Feet per Bed	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Most favourable ratio	8.1	4.5	6.9	4.0	9.2	5.9
Least favourable ratio	3.5	0.15	1.8	1.5	0.69	0.9
Average ratio	3.8	0.8	2.9	2.5	3.0	1.8

TABLE 9

Square Footage of Pharmacy Space per Member of Pharmacy Staff, by type of Hospital

Square feet per Staff Member	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Most favourable ratio	388	3400	432	360	700	594
Least favourable ratio	105	75	140	104	57	147
Average ratio	195	411	256	196	298	278

PHARMACY SIZE, FUTURE PLANS

TABLE 10

Pharmacists' Reactions to Present Accommodation, by type of Hospital

	Type of Hospital												Overall	
	Teaching		Mental		Group		Maternity		General		Special		Percentage	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Percent. Satisfied	4	40	10	71.4	5	55.6	1	25	7	28	2	33.3	29	42.6
Percent. Dissatisfied	6	60	4	28.6	4	44.4	3	75	18	72	4	66.7	39	57.4

TABLE 11

Rebuilding Plans and Consultation with Pharmacists

	Type of Hospital						
	Teaching	Mental	Group	Maternity	General	Special	Totals
No current plans	4	11	2	1	11	4	33
Current Plans (pharmacist consulted)	6	3	7	3	12	2	33
Current Plans (pharmacist not consulted)	—	—	—	—	2	—	2
Totals	10	14	9	4	25	6	68

TABLE 12

Consultation with Pharmacist, Current Plans, by type of Hospital

Type of Consultation	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
(a) In preparation of Schedules	6	3	7	3	11	2
(b) At sketch plan stage	6	1	6	3	10	2
(c) Final details	6	1	6	3	9	1
(d) All stages	6	1	6	3	9	1
Total Building Programme	6	3	7	3	11[1]	2

[1] One uncertain

SERVICES PROVIDED

TABLE 13

Range of Services Provided, by type of Hospital

	Type of Hospital					
Service Provided	Teaching	Mental	Group	Maternity	General	Special
Supply of Medicines	10	14	9	4	25	6
Supply of Dressings	8	5	8	4	19	2
X-ray Supplies	8	2	4	—	8	—
Surgical Instruments Sundries	9	8	7	4	20	6
Anaesthetic equipment etc.	3	2	—	—	10	—
Electro Medical Equipment	1	—	2	—	—	—
Laboratory supplies, equipment	7	2	4	1	9	1
Central Sterile Supply	2	2	4	—	6	1
Medical Photographic Supplies	1	—	—	—	—	—
Electro-cardiographical Supplies	1	—	—	—	—	—
Dental Supplies	1	—	—	—	—	—
Radioactive Materials	1	—	—	—	—	—
Spectacles, optical appliances	1	1	—	—	—	—
Crutches, walking sticks, etc.	1	1	—	—	2	—
Operational Research	1	—	1	—	1	—
Information Courses etc.	2	—	1	—	1	—

TABLE 14

Small Scale Manufacture, by type of Hospital

Manufacture Undertaken	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Infusion Fluids	9	1	5	—	14	1
Sterile Powders	3	1	1	—	9	—
Lotions	5	1	5	—	7	—
Antiseptics	3	2	1	—	1	—
Eye Drops	2	1	4	1	3	1
Ointments, etc.	6	3	6	—	9	1
Ampoules	5	—	4	—	9	2
Injections	6	2	2	—	7	1

TYPE OF SERVICE PROVIDED

TABLE 15

Supply of Drugs to Patients leaving Hospital by type of Hospital

Method of Supply	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Supplies direct from Pharmacy	10	11	5	1	16	5
Hospital R.B.P. Forms	6	3	3	4	7	—
Supplies given by wards	5	5	5	3	13	4
Instructions to G.P.	8	10	9	4	13	5

TABLE 16

Supply of Drugs at Ward Level

Number of Days' Supply, by type of Hospital

Days' Supply (In ( ) are unsatisfactorily Labelled)	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Up to 5	4 (1)	4 (2)	3 (2)	3 (1)	11 (3)	2 (-)
Over 5 – 10	1 (-)	2 (1)	- (-)	- (-)	1 (-)	1 (-)
Over 10 – 15	1 (-)	1 (1)	- (-)	- (-)	- (-)	- (-)
Over 15	1 (-)	1 (1)	- (-)	- (-)	- (-)	- (-)
Not stated	1 (1)	1 (1)	2 (2)	- (-)	1 (1)	1 (-)

TABLE 17

Single-handed Pharmacists: Arrangements when Pharmacist ill or on holiday by type of Hospital

Type of Arrangement	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Qualified locum	—	8	—	1	6	3
Unqualified assistance	—	1	—	—	—	—
Senior Assistant in Dispensing	—	2	—	—	—	—
Medical Staff (Dangerous Drugs)	—	1	—	—	—	—
Local Pharmacist on hourly basis	—	1	—	—	1	—
No arrangements	—	—	—	—	—	1
Total hospitals concerned	—	13	—	1	7	4

TYPE OF SERVICE PROVIDED

TABLE 18

Arrangements for 24-hour Service by type of Hospital

Type of Arrangement	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Qualified staff on call by phone	9	6	8	4	14	4
Pharmacist lives in premises	—	—	1	—	4	—
Emergency Cupboard	5	4	1	—	8	—
Medical Staff have access to pharmacy	—	4	—	—	5	1
No service provided	—	1	—	—	4	1

TRANSPORT OF DRUGS, CARE OF DANGEROUS DRUGS

TABLE 19

Transport of Drugs to Wards and other Departments, by type of Hospital

Method of Transport	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Collection by Ward Porters or other Ward Staff	3	9	5	4	16	5
Pharmacy Porter	8	1	4	—	5	—
Delivered by Van	—	5	—	—	4	1

TABLE 20

Transport of Drugs to Other Hospitals by type of Hospital

Method of Transport	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Hospital Transport	7	6	8	4	15	2
Routine Taxi Service	1	—	—	—	—	—
Personal Delivery by Pharmacist	—	1	—	—	1	—
Collection by Doctor in other Hospital	—	—	—	—	1	—
Bus Post	—	—	1	—	1	—
Postage	—	—	—	—	1	—

TABLE 21

Signing of Ward Orders for Dangerous Drugs by type of Hospital

Orders Signed by	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
Doctor	9	12	7	4	21	6
Sister	2	3	4	1	11	3
Registered Nurse	2	1	4	1	6	1

TABLE 22

Research Done or Proposed, by type of Hospital

	Type of Hospital											
	Teaching		Mental		Group		Maternity		General		Special	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Is Research done?	4	6	–	14	–	9	–	4	2	23	–	6
Would it be done if circumstances permitted?	4	2	5	9	4	5	1	3	13	12	1	5

TABLE 23

Storage of Disposables, by type of Hospital

Place of Storage	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
General Store	6	8	3	3	12	3
Surgical Instruments Service	4	—	1	—	2	—
Dressings Store	3	—	2	1	6	1
Theatre Store	1	—	—	—	—	—
Central Syringe Store	1	—	1	—	1	—
Special Store	—	—	1	—	—	—
In Wards' Stores	1	1	—	—	—	—
In Dispensary	1	—	—	—	1	1
No Storage Space	1	5	3	—	5	1

TABLE 24

Disposal of Disposable Equipment, by type of Hospital

Method of Disposal	Type of Hospital					
	Teaching	Mental	Group	Maternity	General	Special
By Incinerator	5	8	5	4	13	4
By arrangement with Local Authority	1	—	—	—	—	—
No Facilities	4	6	4	—	12	2

TABLE 25

Answers to Questions 37 - 42, 44 and 46 of the Questionnaire analysed by type of Hospital

	Questions in Questionnaire	Teaching		Mental		Group		Maternity		General		Special		Totals*	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
37.	Is the Chief Pharmacist a member of the Hospital Prescribing Committee?	10	–	11	3	9	–	4	–	15	10	4	2	53	15
38.	Is Recommendation 2 of the Douglas Report implemented in hospital?	3	7	3	10	2	7	2	2	3	20	1	5	14	51
39.	Is Pharmaceutical Department encouraged to dispense identical equivalents?	10	–	14	–	9	–	4	–	21	4	6	–	64	4
40.	Are doctors encouraged to use official or approved names?	10	–	13	–	9	–	3	1	25	–	6	–	66	1
41.	(a) Do the staff have access to the Prescribers' Journal?	9	1	13	1	9	–	4	–	20	5	6	–	61	7
41.	(b) Do the staff have access to the Medical Letter?	6	4	5	9	5	4	–	4	3	21	2	4	21	46
42.	What action has been taken on Recommendation 22 of Douglas Report?	6	2	7	5	4	4	4	–	4	14	2	4	27	29
44.	Is the Chief Pharmacist a member of Control of Infection Committee etc.?	4	6	2	12	3	6	–	4	5	20	–	6	14	54
46.	Is there a Pharmacy Advisory Committee in the Region?	7	3	8	6	6	3	4	–	16	9	4	2	45	23

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* Although 68 hospitals returned the questionnaire, in a few cases all the questions where not answered.

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